

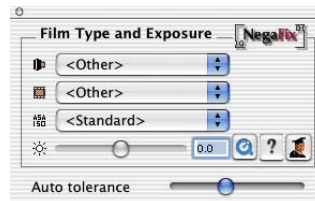
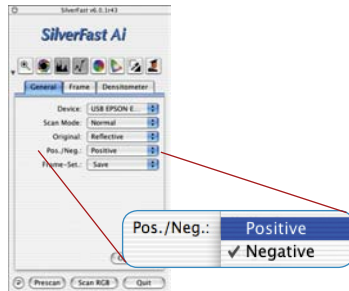
6.7 NegaFix - Scanning Negatives*

1. Optimisation of Negatives (Film) with Integrated Profiles



The negative-positive conversion of normally-exposed and developed negatives using *SilverFast's NegaFix* can be achieved with a few easy steps.

Go to the "General" panel and switch the menu "Pos./Neg." to "Negative" mode. When this occurs, the "Negative" dialogue window* with "*NegaFix*" will appear.



**Which versions of SilverFast contain NegaFix?*

SilverFast...SE contains merely a simplified dialogue.

SilverFastDCSE and -DCVLT versions do not contain this feature.

**Auto-tolerance slider and expert dialogue*

The slider is available only in the SilverFastAi..., -DCPro... and -HDR...-full versions.

The *NegaFix* window offers three pop-up menus and two* sliders. The pop-up menus are used for the selection of the appropriate characteristics of the negative film:

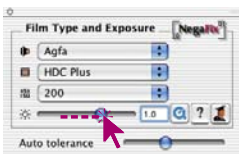
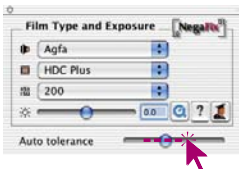
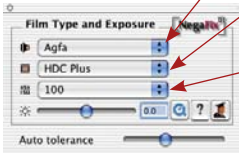
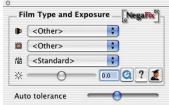
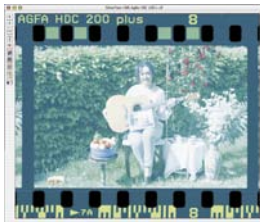
- Manufacturer**, or film brand
- Film type** or film name
- Film speed** (sensitivity)

By means of the slider "**Exposure**", or the input field, the **film exposure** of the negative can be adjusted within plus/minus 3 f-stops.

The slider* „**Auto tolerance**“ allows adjustment of highlight in the automatic Film mask recognition.



Begin with a prescan in order to obtain an overview of the image. The preview will display an uncorrected positive image. Please follow the steps on the following page:



1. Image Frame Selection

Ensure the selection marquee is inside the image and does not touch the perimeter of the film material. The image on the right has been automatically optimised with the integrated “Standard Profile”.



2. Select Film Manufacturer

Select manufacturer or negative film brand: e.g. Agfa.

3. Select Film Type

Select the film type: e.g. HDC

4. Select Film Speed

With the pop-up menu, select the film speed (ASA/ISO value) of the actual film. All chosen settings will be instantly updated in the preview window.



5. Auto tolerance

In case the image still lacks neutrality, this slider can be used to adjust the tolerance of the mask-recognition (in the high-lights)



6. Correct Film Exposure

Normally, a correction of film exposure is not necessary. If the image appears too bright or too dark, use the slider to simulate a film exposure of ± 3 f-stops. You will see the correction in real-time on the preview.

7. Apply Auto-Adjust

Now the process of negative-positive conversion is complete. To fully optimise your image, press the *SilverFast* auto-adjust button from the tool bar as usual and/or apply other *SilverFast* tools as desired.

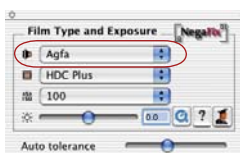
2. Example Optimisation of a Negative



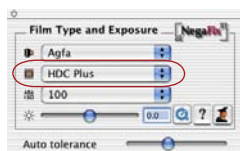
This example shows the optimisation of an “Agfa, HDC 200 plus” Negative:

First, switch the mode from Positive to Negative and start a prescan. The prescan window will show an image converted to positive.

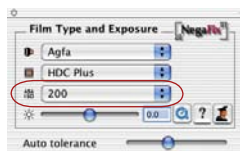
Change the scan frame so that it is only covering the actual image pixels and does not touch the perforation holes of the film.



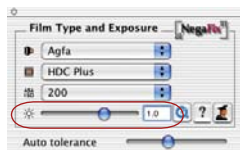
- Film manufacturer: “Agfa”
This pop-up allows selection of the manufacturer of the Negative film. The selection effect will update the preview window in real-time.



- Filmtype: “HDC plus”
Select the specific film type in this pop-up. Every film preset will distinctively change the frame in the preview window.



- Film speed: “200 ASA”
In this pop-up, you can select the film speed (ASA/ISO value) of the film being used. The selection will again update the preview window.



- Exposure correction: “+1 f-stops”
Finally, with this slider, you can correct the film exposure within +1 f-stop.





This completes the process of converting a negative to a positive.

In order to get optimum results, you only need to click the *SilverFast* auto-adjust button.

The auto-adjust will set the correct high-light-shadow values as well as the overall brightness for the active scan frame.



NOTE!

The IT8 calibration only applies to the "positiv"-scan mode (slides and photographs). Calibration is automatically disabled in „negative“- mode.

In case the results are not as desired, try other film presets (manufacturer), film speeds, sometimes even with a profile of another manufacturer to get better results.

Switching to expert mode is only necessary if the above suggestions aren't suitable.

You can now continue with the normal *SilverFast* tools for further optimisation until you start the final scan:

e.g. naming the image, scaling, USM, descreening, selective colour correction, ... and finally scan in CMYK or RGB.

3. The Expert Dialogue*

When should the Expert Dialogue be used?

In any case you should first use the normal procedure to convert a negative to positive as outlined in chapter 2.

*** Attention!**

the expert dialogue will only be available in *SilverFastAi*, *SilverFastHDR*, *SilverFastDC*, etc.

SilverFastSE-Versions will not have the *NegaFix* expert dialogue



When these steps do not yield the desired results, open the “expert dialogue”. This could for, instance, be the case when profiles for a specific film are missing, or when the existing profiles do not convert the negative correctly.

Importing film profiles: All film profiles embedded in *SilverFast-NegaFix* can be found by this link:

<http://www.silverfast.com/show/negafixprofiles/en.html>

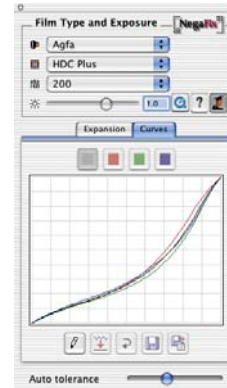
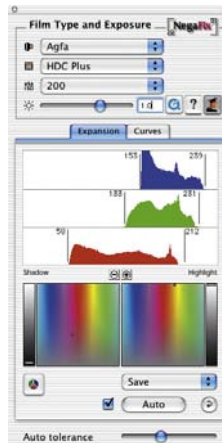
The unpacked data can be imported into SilverFast by means of the import menu, found in the *NegaFix* dialogue -> Film manufacturers -> Import.



Expert Dialogue Overview

The expert dialogue comes up when you click the “Expert” button and consists of two major panels:

- the dialogue “Expansion” to monitor and control the dynamic range and expansion of the negative
- the dialogue “Curves” to characterize the profiles and eliminate colour casts.



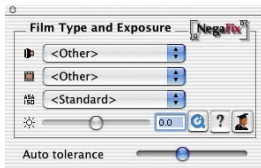
Workflow of Expert Mode

A short description of how to optimise a negative with the expert dialogue:

1. Standard menu: Select a film profile

Even when none of the profiles will yield a good result, the best possible should be selected. If the deviation is too strong it would be better to switch to “Other”, or “Standard”.

Refer to the procedure for selecting profiles on pages 5, section 1 to 5.



2. Expansion Menu

Using the slider “Auto tolerance” will adjust the strength of the auto-masking process.

The effect can be monitored in the histogram and preview window. The slider at the position utmost left indicates minimal effects

3. Curves Menu: Adjustment of curves

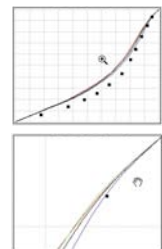
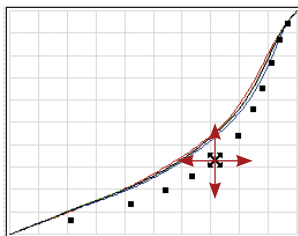
Change to “Edit” mode (click on pencil). Drag the curves so that the image in the preview window will look as desired.

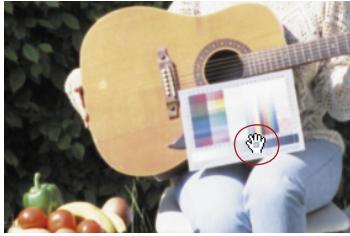
Single curves can be selected by clicking the colour patches (red, green, blue for single curves) above the curves dialogue (to select all curves, click grey patch). All curves are selected by default.

Single curve points can be moved with the mouse.

For a more precise adjustment, it is possible to zoom into the curves (“plus” magnifier; pressed “Alt” key “Minus” magnifier)

In the zoomed mode, the visible area may be moved with the pressed “Shift” key.





4. Curves Menu: Set Neutral Grey

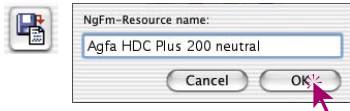
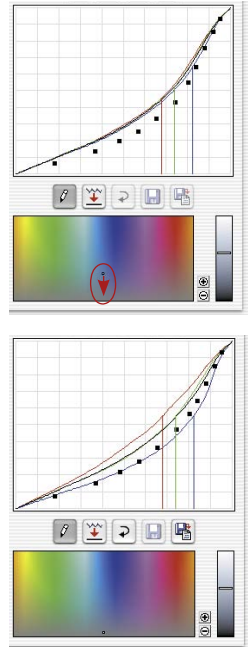
Sometimes image areas that should be neutral have a colour cast. This can be easily neutralized or even changed into another colour:

With the curves in edit mode, click onto the colour cast area in the preview. This point in the gradation curves is marked by vertical lines and marked in the HS and L dialogue display below by a single point or a line respectively.

Drag this point in the HS dialogue vertically down to the horizontal grey axis.

The preview window will reflect the change immediately.

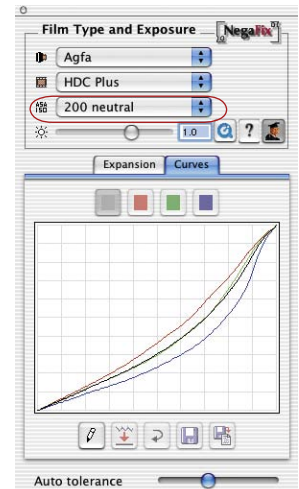
If you do not want this point purely neutral, you can drag the point into any other area of the colour space. It is now up to you: which tint you will give to your grey: colder and more blue, warmer and more red, or ...



5. Curves Menu: Save the newly Created Profile

Click on "Save as"- button and give the newly created profile a new name.

Custom profiles will appended in the pop-up "ASA/ISO".

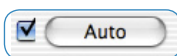
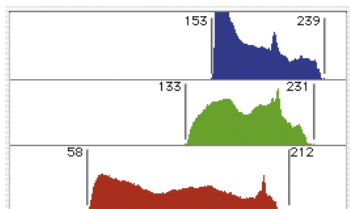


The Expansion Menu in Detail

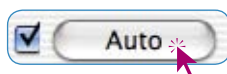
The upper portion of the expert dialogue, the “Expansion” menu, monitors the orange mask histogram and how *NegaFix* will optimise the orange mask. The histogram will also allow optimisation of the orange mask manually.

Automatic Mask

The upper half shows the negative histogram, and how the mask automatic has set the highlight and shadow points.



The automatic mask is continuously active, indicated by the check mark, left of the button “Auto”. In case the scan frame must be altered after optimizing it with the *NegaFix* function it is advisable to turn off the mask automation. If this is not done, *NegaFix* will calculate new values and hence alter the current colours.

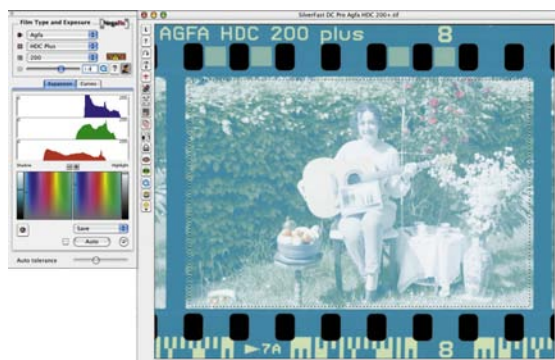


Clicking the button “Auto” will activate the automatic mask manually. *NegaFix* will analyse the negative again, remove the orange mask, and show the resultant histogram and preview image.

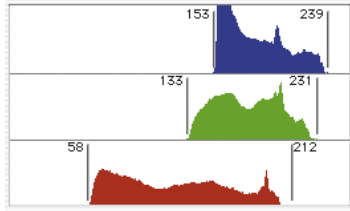
Note!



This icon indicates a warning when the automatic mask is inactive. It will appear in the upper area of the *NegaFix* control window. It will also appear after clicking the button “Reset”.



The orange mask removal will be indicated (or controlled) through the position of the vertical delimiters left and right of the single histograms. The orange automatic mask will move the delimiters to the initial pixels in the single histograms channels.



The numbers beside the delimiters will indicate the corresponding tonal value. The delimiters can also be used as sliders and actively control the orange mask removal process.



The strength of the orange automatic mask can be controlled with the slider “Auto Tolerance” Moving the slider to the far right will have the greatest effect.

Any change can be monitored in the *NegaFix* dialogue window and also immediately updated in the large *SilverFast* preview. This way you will always be in full control over the results of your corrections.

Additional Buttons in the Dialogue Window



Clicking the “Reset” button will reset all settings and will also switch the orange automatic mask off. After a reset the warning icon (auto-mask off) will appear as a reminder.

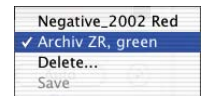
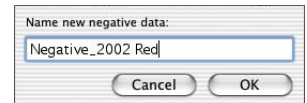
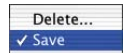


This button will switch the appearance of histograms for monitoring between RGB (“tonal values” 0 to 255) and CMY (“percentage values” 0 to 100).

The button will only switch the appearance and will have no influence on image quality or any other changes.



The pop-up menu “Save” allows saving of custom highlight/shadow points for the orange mask process or loading of previously saved orange mask H-S points.

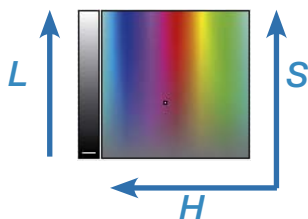


Setting Orange Mask Highlight Shadow points



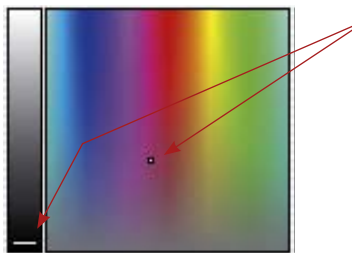
The lower part of the “Expansion” dialogue monitors the position of the orange mask highlight-shadow points within the 3-dimensional HSL colour space.

Both, highlights and shadows will normally have a visible colour cast. The auto-mask will recognize and remove this cast.



The position will be displayed within the square colour space and within the vertical luminance field.

The vertical fields indicate luminance (“L”). The colour square will show the colour hue (angle) horizontally and the saturation (“S”) vertically.



The markings (short bars within the vertical fields, small points within the colour square) indicate the exact position of the highlight-shadow points in the colour space.

The bars, as well as the points, are colour cast correction controls and must be moved with the mouse. Any change will be displayed within the *NegaFix* dialogue window and immediately updated in the *SilverFast* preview window.



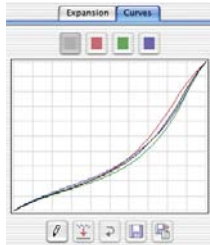
Original view



View after clicking the zoom 3 times.

With the integrated zoom function, you can freely zoom into and out of the colour space.

This will enable very subtle corrections of the neutrality of the orange mask highlight-shadow points.



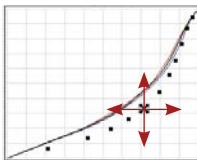
The Curves Menu

The second window of the expert dialogue, the “Curves” panel, monitors the RGB-curves of the active film profile: All curves (black), as well as the single curves red, green and blue. This dialogue allows modification of an existing film profile directly and allows it to be saved as a new profile. The colour character of the negative profile can be changed and colour casts can be removed as well.

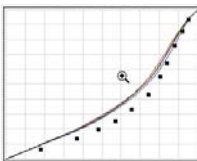
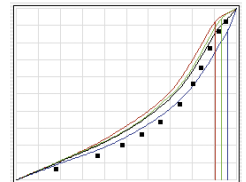
Changing the Film Gradation Curves



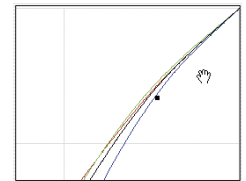
The “Edit” button activates the curves dialogue. A black overlay curve, defined by a succession of black curves points will appear. The sequence of points represents the character of the original film manufacturer profile.



For a more precise adjustment it is again possible to zoom into the curve (“Plus” magnifier; and with the “Alt” key pressed the “Minus” magnifier). Within the zoomed mode, the visible area can be moved by pressing the “Shift” key and moving the mouse.



Single points on the curves may be touched and relocated with the mouse. For a more precise adjustment, it is possible to zoom into the curves („plus“ magnifier; pressed „Alt“ key „Minus“ magnifier). In the zoomed mode, the visible area may be moved with the pressed „Shift“ key.



Selecting any of the RGB selectors above the curves will activate any of the red, green or blue curves accordingly. Clicking the grey selector will activate all curves .



The button “Smoothen” allows to smoothening of an active curve which might be slightly rough. This function can be used repeatedly: Additional clicks will invoke further smoothening operations. Several clicks will increase the effect.

Neutralizing Colour Casts



First click the edit button to activate the curve dialogue.

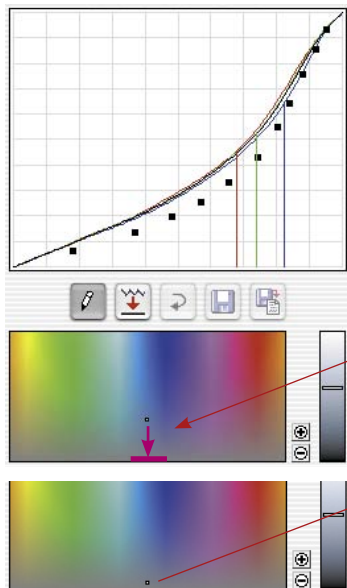
Move the cursor into the image preview window and click onto the area you want to neutralize. While moving the cursor, you can monitor the colour values (CMY recommended) in the floating densitometer.

Clicking onto the image will bring up a new dialogue below the *NegaFix* curve dialogue window. The image point you have clicked onto will be monitored as a small point in the HSL colour space, and the tonal values will be indicated as vertical lines in the film gradation window.

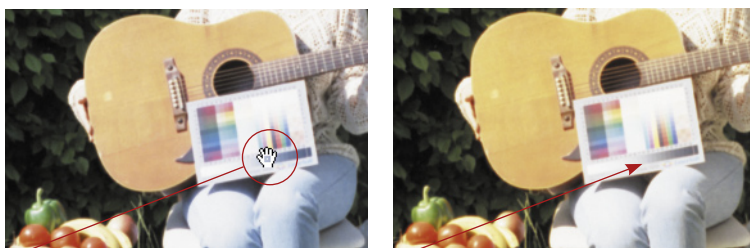
Again the markings in the HSL dialogue represent controls which can easily be moved with the mouse.

For more subtle control, zoom buttons can be clicked to zoom in and out of the colour space.

All changes of all controls will immediately be displayed in the *SilverFast* preview window.



Neutralizing a colour cast is achieved by dragging a point in the HSL dialogue down to the neutral grey axis.



After releasing the mouse the preview window will be updated.

Producing a Colour Cast Deliberately

Naturally any point within the HSL colour space can be moved to any other colour. This will produce a colour cast..

With many images, pure neutrality will look unnatural,



Think about pictures of a sunset. A warm reddish colour cast is surely desired versus a cold neutral rendering



Image with neutral grey

Image with yellowish grey

Saving Changes as a New Profile

Once all changes are done and the preview window shows the desired results, the updated settings can be saved as a new profile:



Clicking the “Save” button will save all parameters in the current profile. Of course the previous profile will be overwritten.



It is safer to use the option “Save as”. Here you can give the profile a new name.

New profiles will be saved under the “ASA/ISO” pop-up menu list and can be reused at any time.

4. DIGITAL ICE technologies used with Kodachrome- and b/w films



The much implemented scratch and dust removal solution “DIGITAL ICE technologies”, which is hardware-implemented in many different scanners, does not operate properly with Kodachrome and conventional b/w films (for both negatives and slides)!

Because of the tanning that occurs while developing the film, a structure is generated on the film which gives different calculation indices in the different layers of the film. This and the high percentage of silver in these films, may lead to unsatisfying scan results.

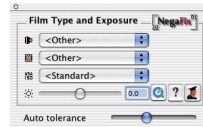
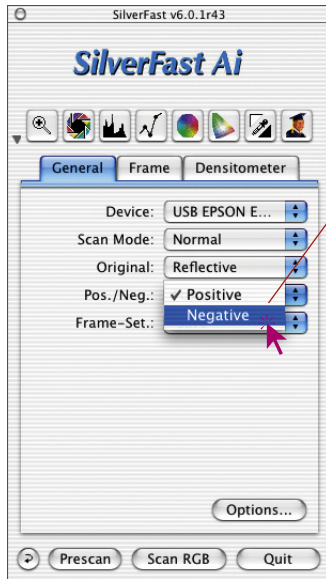
It is hence advisable to deactivate the “DIGITAL ICE technologies” for such films.

The *SRD* function implemented in *SilverFast* works fine with all types of film.

5. Reference Card *SilverFast NegaFix*

Overview *SilverFast*

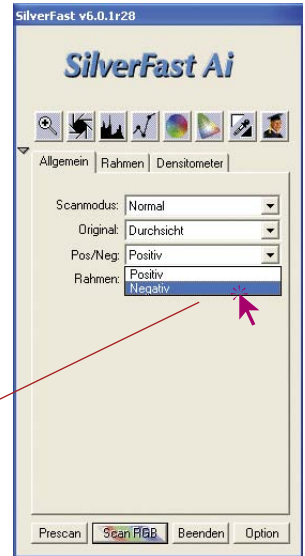
NegaFix can be activated from the “General” panel by selecting the “Negative” pop-up.



NegaFix dialogue in *SilverFastAi* under *Macintosh*



NegaFix dialogue in *SilverFastAi* under *Windows*

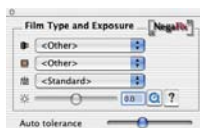


Overview *SilverFastSE*

The extended functionality of the “expert dialogue” is only available in the full versions of *SilverFastAi...*, *SilverFastHDR...*, *SilverFast-DC...*, etc.



In *SilverFastSE...* versions, the expert dialogue is not available. All film parameter selections can be fully applied.



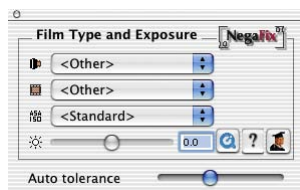
NegaFix dialogue in *SilverFastSE* under *Macintosh*

NegaFix dialogue in *SilverFastSE* under *Windows*



SilverFastNegaFix Components

The standard dialogue can be extended by clicking onto the “Expert” button*. In extended mode, you can switch between the panels “Expansion” and “Curves”:



NegaFix Dialogue

Standard dialogue editing of negative film contains these controls:



Pop-up to select film manufacturer



Pop-up to select film-type



Pop-up to select film speed



Slider for film exposure control



Button to open / close expert dialogue*



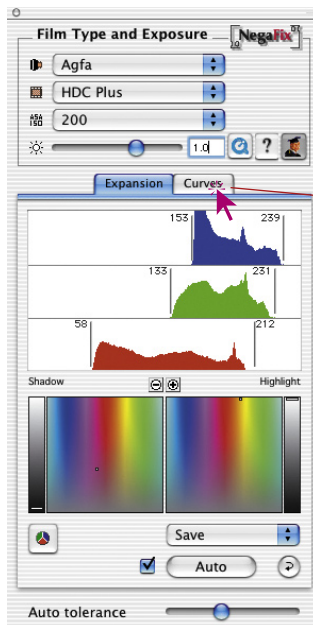
Button to open help-file



Warning to indicate automask*

* Note!

Only available in full version of SilverFast Ai, not available in “SE” version!



Expert-Dialogue* “Expansion”

Single control elements:



Switching between CMY- or RGB- monitoring in the histogram



Mask automatic button



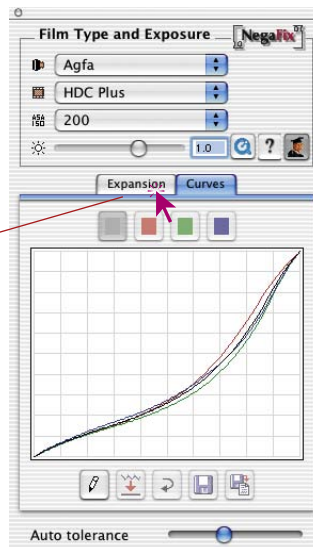
Reset button



Save menu



Auto tolerance slider for mask automation



Expert-Dialogue* “Curves”

Single control elements:



Edit-Mode on/off



Smoothen curves



Reset button



Save button



Save-as button



Select single colour channels (RGB)