Chapter 4

Prescan Design

4. SilverFast Prescan Design

This chapter introduces into the core design of *SilverFast*. All controls rely on what you see and monitor on the prescan. This concept of working with a low res image and a greater than 8 bits per colour dynamic range is substantially different from other concepts of optimising images.

4

SilverFast Prescan Concept

An entirely new prescan concept was developed with *SilverFast*. It allows you to make all necessary corrections on the prescan. All parameters for the individual scan frames are retained.

Realtime Processing

Starting with version 5 by *SilverFast*, all image corrections such as gradation, global and selective colour corrections which the user would like to use by inputting or slider are presented in "Prescan" in realtime. This is of particular advantage in colour processing, tonal values and gradation correction.

The Prescan Concept Advantage

It is very important to understand the prescan design concept, because especially with a scanner, you want to take full advantage of the internal capabilities of your scanner. For this reason it is vital to control all quality factors based on what you see (and measure) on the prescan.
Since the prescan is fast and is only a low resolution image of the final scan, all operations are realtime so that you get an immediate response from what you are doing to your image.
Another advantage is that everything you do can be undone.
Never do you do anything to the final image until you hit the "Scan" button.

SilverFast Prescan Design

The following advantages of the prescan design are clearly oriented for productivity and ease of control.

1. Saved Prescan for Reflective and for Transparency

SilverFast can retain all parameters from multiple scan frames when scanning both reflective and transparency. All parameters inside a scan frame are automatically stored and can be reloaded at any time.
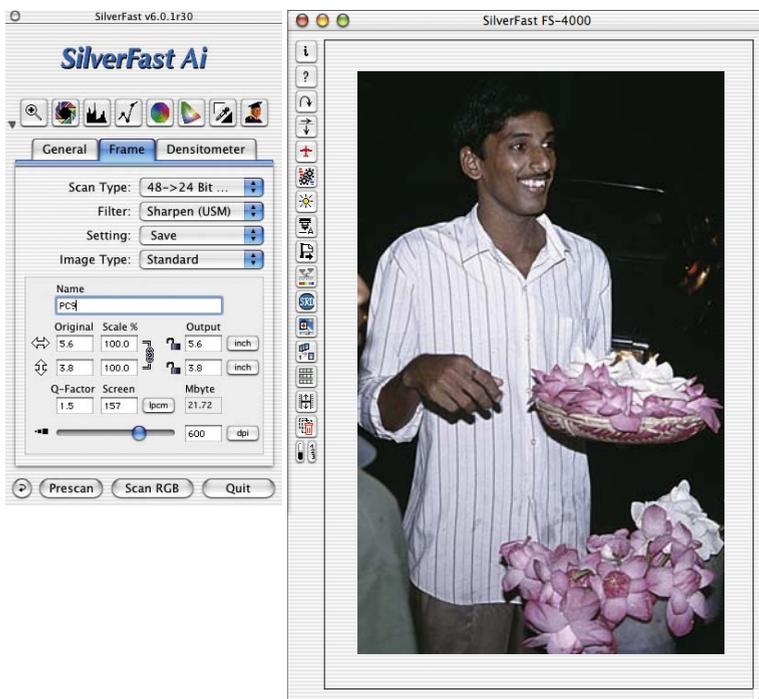
2. Multiple Frames on Prescan

You can create any desired number of scan frames on the prescan image. In order to do this, move the mouse to the upper left corner of the desired new frame, hold the mouse button, and drag the mouse to the lower right corner of your desired frame. Only one frame is active at a time and the image inside can be changed with *SilverFast*'s tools. By clicking inside an image the appropriate frame becomes activated.

The starting point of a new frame must be outside existing frames. The new frame can then be positioned anywhere in the preview; resize frame as needed.

SFprefs (Scanner)

Individual parameters of all scan frames are automatically stored within a SilverFast Prefs file.

Multiple scan frames

Here any desired number of frames can be drawn on the preview area representing the flat bed scan area of the scanner.

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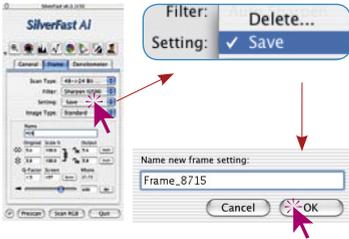
3. Loading and Saving single Scan Frame Parameters

SilverFast enables you to save and reload frames with their associated settings like scan-mode, highlight-shadow-values, gradation curves, scaling and scan-resolution. This will help you in having your most wanted settings and frames quickly available.

In order to save a new scan frame with all its settings, go to "Setting" – "Save" under the frame panel and input an appropriate name.

If the name does already exist you will be asked whether you would like to replace that name.
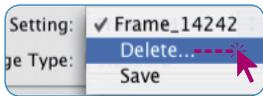
In order to delete a setting go to "Delete" under the same menu. You will get a list of all existing settings. Select the settings you would like to delete and click on "Delete…".

4. Batch Scans from *SilverFast*

Batch scans represent automated processing of numerous scans (scan frames) on a computer. *SilverFast* supports various kinds of batch scans.

First you draw several scan frames and allocate individual settings to those frames if desired.

Clicking on the right half of the "brightest-darkest point / show frame number" button will show the **frame numbering**.
Now one of the Batch modes will be activated.
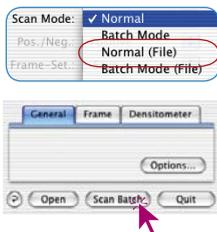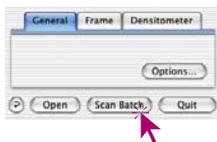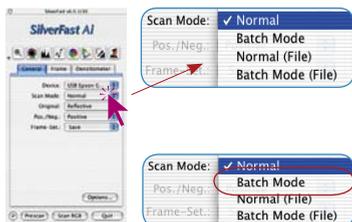
In the "General" panel click the pull-down menu "Scan Mode". The following scan modes are available: "Batch Mode" and "Batch Mode (File)".

a. Batch Scans directly into the Imaging Application

In order to scan all frames one by one, under **"Scan Mode"** go to **"Batch Mode"** and click the scan start button "Scan Batch" – all frames are scanned into the imaging application the order mentioned. All scans will be numbered accordingly.

b. Batch Scans directly to the Hard Disk

In order to scan all frames to hard disk one by one, go to "Scan Mode" - **"Batch-Mode (File)"**. After clicking the "Scan Batch" button the following dialogue will come up.
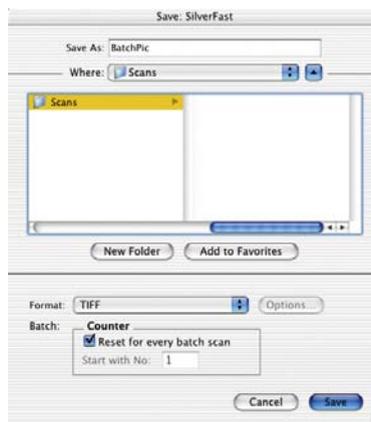
In the dialogue window you can define the file destination hard disk and the folder as well as define the general file name, which will automatically be appended with numbers 1 to ...

As file format you can choose between "TIFF", "JPEG" and "EPSF".

5. Saving and Loading several Scan Frames as one Setting

SilverFast allows to save a whole set of all scan frames on the prescan with all its individual settings and reload them a any time.

This function is of special significance for flat bed or large format scanners.

The function saves all settings including scan frame position, scan mod, highlight-shadow values, gradation curves, scaling and resolution.

This way you can quickly allocate settings to repeatedly upcoming tasks (e.g. several framed 35 mm slides) and also set up the required processing.

In order to save a set of scan frames with their settings, go to "Settings" under the General Panel and input an appropriate name.

In case this name does already exist you will be asked whether you want to overwrite (replace) that name.

In order to delete a settings go to "Delete" under the same menu. You will get a list of all existing settings. Select the settings you would like to delete and click on "Delete".

4 • Prescan concept

SilverFast® Manual
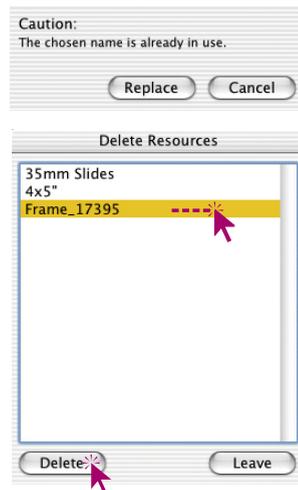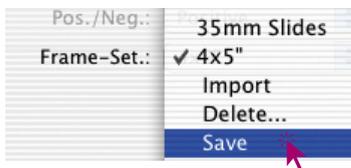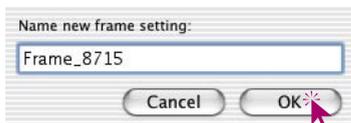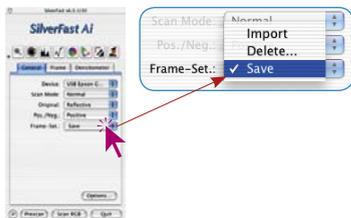
6. Activating Scan Frames

In order to activate a scan frame, simply click on it. The scan frame will show the marquee being active.

7. Deleting a Scan Frame

In order to delete a scan frame, activate the frame (by clicking onto it), then click the "Delete Frame" button in the vertical tool bar.

### 8. "Reset All" during Deletion of the Prescan Frame

If only one scan frame is still showing in the prescan window, a general reset can be accomplished by clicking the icon for deleting the frame.

In this way, all parameters are set back to "work settings" and the content of the folder "Previews" is deleted.

> Are you sure to delete ALL previews and ALL preview files, and to reset the scan frame?
>
> No   Yes
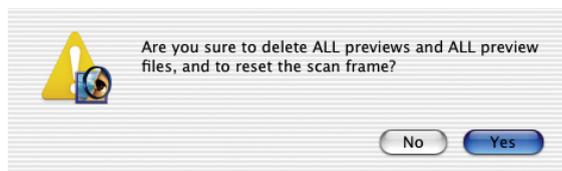
When opened again, *SilverFast* will have a white, empty "prescan window" and all parameters will have default settings.

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9. Moving and Copying of Scan Frames
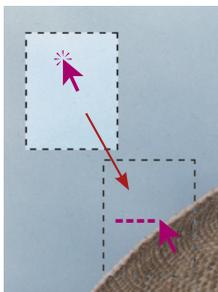
All *SilverFast* plug-ins from version 5 on have modified the use of scan frames.

The **moving of a scan frame** by click dragging remains the same as before. However, during moving, a track of the original position of the scan frame remains at the exit position. This makes it easier to orient yourself. As you release the mouse key, the old frame track will disappear. At the same time, the new scan parameters will update the frame content at the new position.
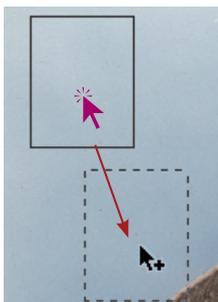
You can now **copy a scan frame** by click-dragging while holding down the "Alt" key. A "Plus" sign will appear next to the cursor.

You can continue to use the previous function for copying. Hold down the "Alt" key and click next to the active scan frame. *SilverFast* will produce a copy of the previous active frame in the prescan window (including all parameters and settings that it contains.).

10. Copying Parameters into another Scan Frame

Macintosh:
First activate the source frame. Then click into the desired frame you want to copy parameters to with "Alt" key *a* depressed. Click another time into the desired frame, this time without "Alt"- key. The desired frame will be updated by the parameters copied.

Windows:
First activate source frame. Hold the "Alt" key depressed and simply click into the desired frame.

11. Permanent Softproof

Starting with version 5 of all *SilverFast* plug-ins, the normal RGB colour monitor display of the prescan window can be permanently converted to a CMYK colour simulation. In this way it ensures that the user can inform himself about the colours that he can choose in the text before the actual scanning.

The precondition for switching is that "P&P CMYK" is selected in the "Colour-Management / internal –> Output" found in the "CMS" settings under the "Options..." dialogue, and that in the same palette under "P&P CMYK" a suitable separation profile is selected.

Please make sure that the same separation profile is selected in your imaging program!
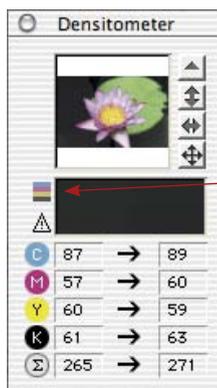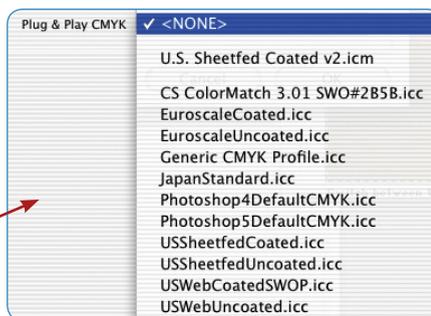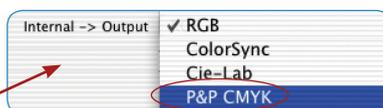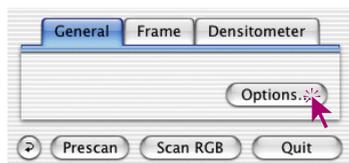
After establishing these settings, you can switch between the RBG and the CMYK settings in the densitometer window as often as you wish.

To achieve this, click on the button for softproof.

By activating this icon with the mouse, softproof is turned on or off. If softproof is activated, the icon is bright, otherwise it is dim.

12. Softproof of CMYK Colour Separations

If the permanent softproof function is activated, the respective colour can be displayed in the prescan window when clicking on C, M, Y or K buttons of the densitometer.

Any combination of these colours is thus judgeable prior to scanning.

Clicking on the summary symbol will turn back to the full CMYK display.

Colour separation softproof

Cyan

Magenta

Yellow

Black

Combination C + M

C + M + Y

C + K
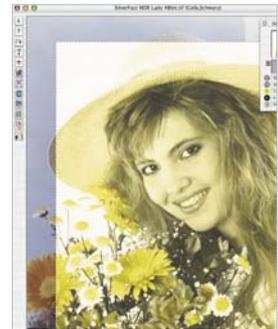
Y + K

Changing the Separation Parameter and Control on the Effect of Shadow-build-up, for Example

It appears to be very practical to already show the effect of various separation profiles in prescan.

Activate the permanent softproof function and choose (e.g.) black, "K" (C, M, and Y are to be deactivated). In the prescan window, the image will now be displayed in accordance with the pre-selected separation profile.
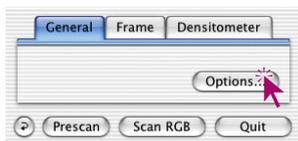
In order to switch to a different separation profile, open the "**Options...**" dialogue.
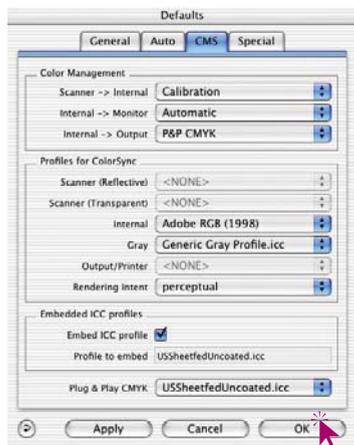
Switch the profile under "**Plug&Play CMYK**" in the "**CMS**" palette.
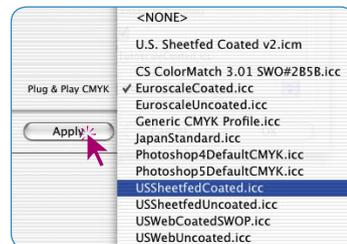
By clicking on "**Apply**" the display in the prescan window will be updated. Changes can immediately be seen on the prescan window.
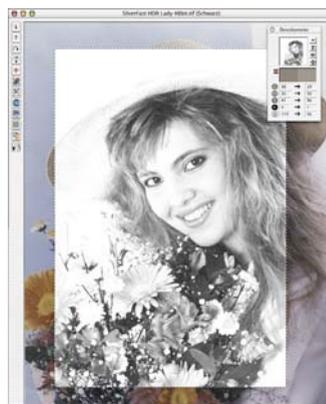
When an appropriate separation has been found, the dialogue can be closed by "**OK**".
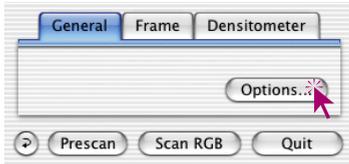
13. Automatic Prescan

If parameters in the "Options..." dialogue have been changed that require a new prescan (Gamma, ICC profile, ...), it is pointed out by a note that this prescan is required for a correct monitor display. The user can then decide for himself if he should start a new prescan.

> Your changes will be correctly reflected in the preview after the next prescan, only!
> Do you want to perform an Auto Prescan now?
>
> No   Yes
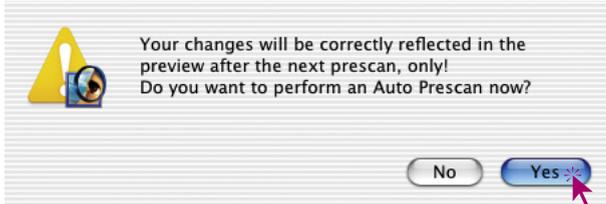
14. Displaying Frame Number

By clicking and holding on to the right half of this button, an individual frame number is displayed in the upper left part of the frame.

The order of these numbers is also the order in which batch-scanning takes place if selected.

The currently activated scan frame always has the number "1"; the previously clicked frame "2" and so on.

By clicking on to the individual frames, the numerisation of these is changed which in turn affects the scan order in batch scans.

Zooming in the Prescan

Depending on the version of, there are a number of methods to zoom into the large preview window.

Zooming in *SilverFastAi* and *-SE*

To quickly zoom into any part of the prescan window, drag a frame around the image and click the magnifier in the tools palette.
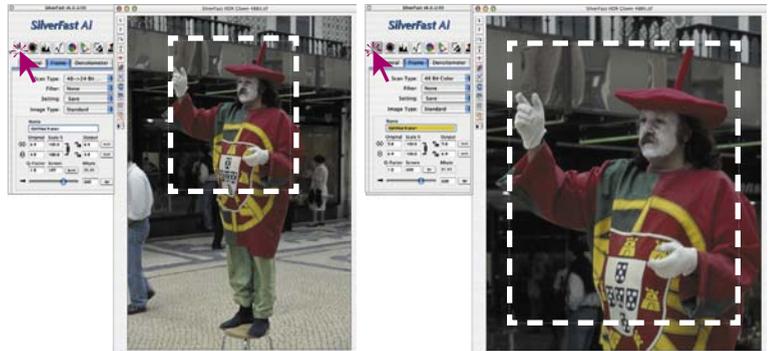
A quick zoom into the prescan window takes place. In order to get back to the overview prescan, reclick the magnifying glass.
The magnifying-glass button functions like a "toggle switch".

If you want to enlarge the zoomed preview further, minimize the scan frame in the zoomed preview and click the "Prescan" button again.
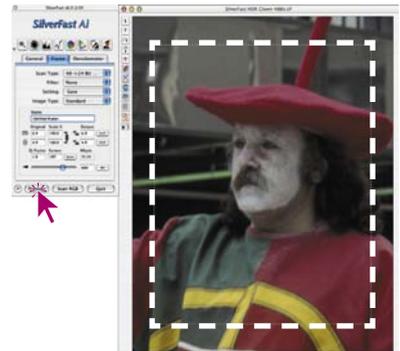
The zoomed-in frame will always stay slightly short of the scan window. This was done so the frame selection can always be corrected later.

You can jump back to the normal preview from the zoomed-in preview by clicking on the zoom tool again. Clicking again on the zoom tool brings you back into the zoomed preview.
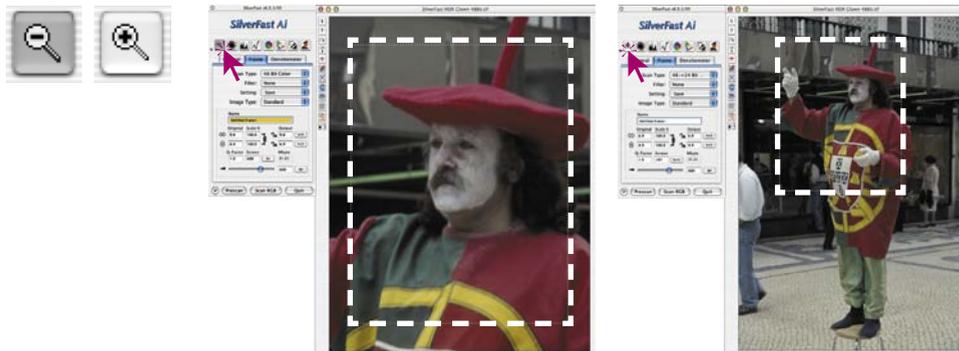
When working with scanners with more than one optical lens (Resolution) see page 103 ("Scanner with Different Optical Resolutions").

Zooming in *SilverFast*

In addition to the previously described zoom functions, the scanner independent *SilverFast* versions, as well as the *SilverFastAiStudio* version, now contain three extensions of the zoom concept.
After opening an image in the large preview window, *SilverFast* now allows to zoom into the prescan without the need of frames.

Zooming by Mouse Click*

In our example (first illustration on the right) the frame is drawn across the entire preview window.

After clicking the magnifier button, initially only a help dialogue which describes the new functions is opened.
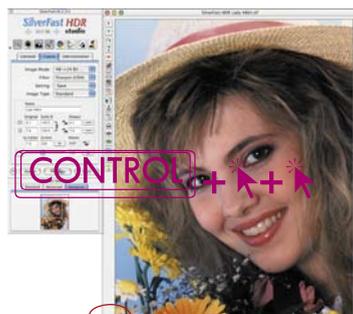
By pressing the "Ctrl" key, the mouse button turn into a "Plus" magnifier. Clicking into the image results in a step-by-step enlargement of the view with each click. In the second example (2nd image left), a double click has been done and the zoom has increased from 55% to 100% in two steps. The value of the current zoom is displayed on the lower left of the preview window. The maximum zoom value is 200%.

Simultaneously, a new palette "Navigator" is added to the "Image Settings" window. The entire image is shown here. The smaller red frame shows the current position of the window on the image.

The current view can be changed by dragging the red frames (3rd illustration left), or by clicking the mouse (4th illustration left). The large preview window changes accordingly.
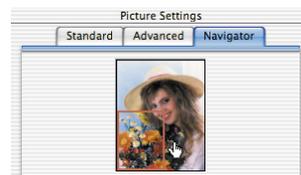
*This "Zoom by mouse-click" function is only available in the SilverFast AiStudio versions if the "High resolution Prescan" has previously been set to level 2 or higher, in the "Options... / General" settings menu.

Keeping the "Ctrl" and the "Alt" keys pressed while clicking the mouse makes the view jump back to the full scale preview. The letter "P" then appears within the mouse cursor magnifier.

Zooming by the Zoom-Display Popup

The value field of the current zoom level also functions as a popup menu.

By this, any of the preset zoom levels can be applied.

Re-activation of the full preview can be done by choosing "Full" in this menu.
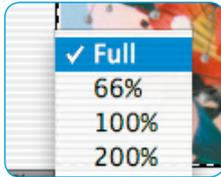
When switching from a small to a larger zoom value, a white frame is displayed initially.

This frame is moveable by dragging the mouse (do not drag, do not click – just move the cursor).

Once the desired part is reached, a click will fix the frame and the contents of this frame are displayed (Illustration below right).
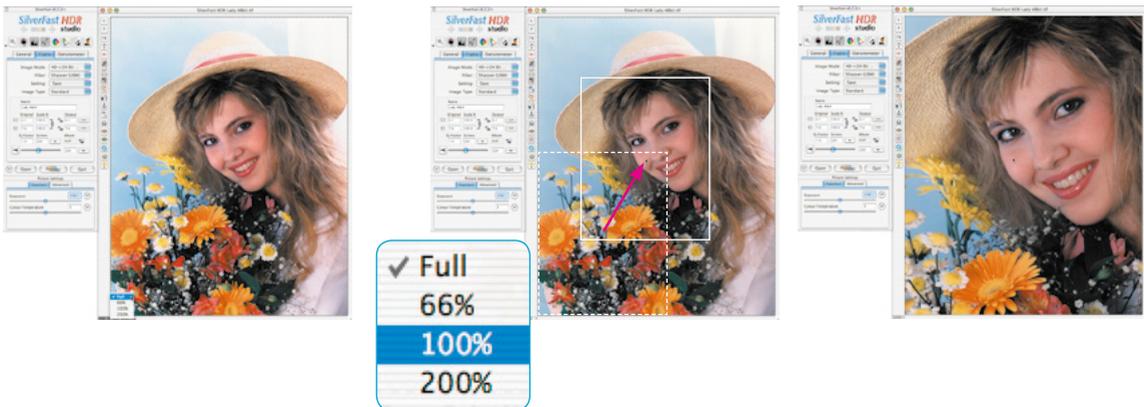
Zooming by Click-Dragging the Mouse

After clicking the magnifier button, a help dialogue which explains the new functions appears.

By subsequently click-dragging the mouse in the large preview area, a new frame may be drawn (middle illustration below). The contents of this frame are enlarged when the mouse button is released (Illustration below right).

Alternatively, an enlargement frame can be drawn by directly click-dragging the mouse while holding the "Ctrl" key pressed. By this method, the magnifier button does not need to be clicked.

The current zoom level is again displayed in the value fields.

The maximum magnification has been reached if a white area is shown instead of the "Plus" symbol while keeping the "Ctrl" key pressed. No further zooms are possible at this stage.

High Resolution Prescan

In order to process work more quickly with *SilverFast*, a prescan can be selected which has a resolution that is up to eight times greater than actually necessary for a normal prescan.

Activation of high resolution prescan is done in the "**General**" palette found under "**Options...**".
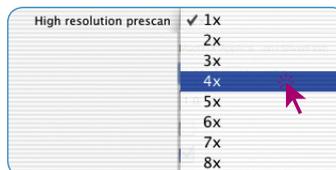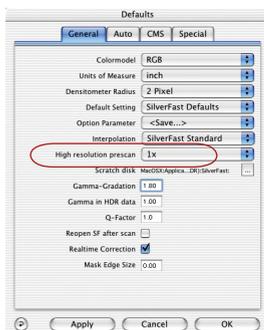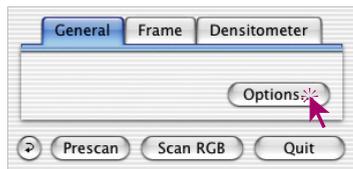
The advantage is that by utilizing a zoom by means of the magnifying glass, *SilverFast* can retrieve data that is already available and immediately show the enlarged preview, without scanning it again. The first prescan will therefore take somewhat longer than normal.

If the selected zoom still lies within the data parameters, the magnifying glass will turn green.

If *SilverFast* has to interpolate the data, (you may already see single pixels in the prescan) the magnifying glass will turn red.

You can still choose a new prescan from your hardware with a click of the prescan button. In this way you can be assured that the most important user interface, the preview, always has optimal resolution.

Zoom and Difficult Corrections

In order to carry out advanced corrections in *SilverFast*, especially when you need to base your corrections on more image details, *SilverFast*'s zooming concept is the ideal solution. Please follow the outlined steps below.

1. Zoom the selection you want to see in more detail.

2. Fix a densitometer point, to monitor the output values. (In order to fix a densitometer point, press the "Shift" key and click on the desired spot on the image).

3. Perform the required corrections (gradation, highlight / shadow, selective colour correction).

4. Jump back to the overview preview (click the zoom tool again).
   While in the normal preview, you might need to look into the zoom again. You can do this by clicking on the zoom tool once again. Only when you change the selection substantially on the preview a new zoom scan be initiated.

5. Now pull out the zoom selection across the whole image (the correction you have done on the zoom selection will be automatically applied to the whole image).

SilverFast always keeps two prescans in memory: the main prescan of the whole scan area and a zoomed prescan.
As long as the selected frame lies inside the area of the zoomed prescan in the memory, no new zoomed prescan will be initiated. If you have zoomed into an image and have decreased the frame size afterwards, clicking the zoom tool will not cause *SilverFast* to do a new prescan with a higher magnification. Instead, push the Prescan button again when in zoomed mode.

Editing a Zoomed Prescan

A zoomed section can be edited at any time. All *SilverFast* tools are available.

The zoomed selection can be made slightly bigger or smaller. Move the mouse over the frame border until horizontal or vertical arrows indicate that you can move the selection marquee. The arrows show in which direction the frame can be moved. After you have made your changes, go back to the full image by clicking on the magnifying glass.
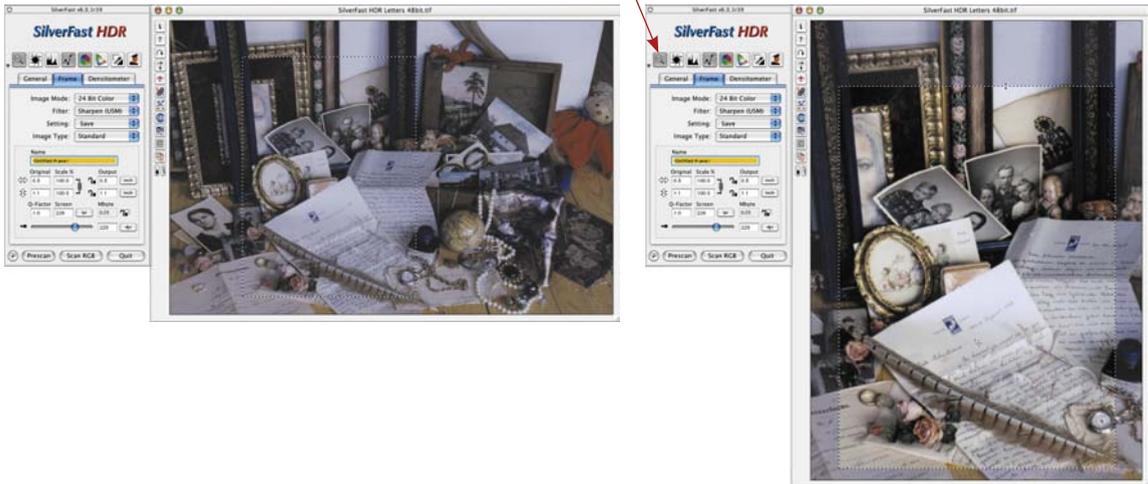
After editing the zoomed prescan you can easily jump back to the overview scan frame by clicking onto the zoom tool.

Scanner with Different Optical Resolutions*
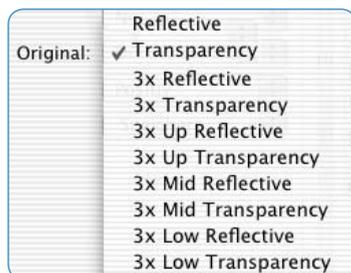
⚠ *NOTE!
Functions are different from scanner to scanner and some of the functions are only available with specific scanners.

**NOTE!
some film scanners allow only a maximum scan area of 6x9 cm, even if the material holder itself allows for much larger originals!
Please refer to your hardware manual for maximum allowed original dimension.

A few scanners* have the ability to use different optics* to supply different optical resolutions. Normally a higher optical resolution has to be switched on with a distinct commend. This will result in a different (smaller) usable scan area. Very often only a small vertical strip in the middle of the flat bed can be used.

Even with the software set to high-res scan mode the first prescan reads the entire scan area. With flat bed scanners, for example, the entire length of the high-res scan area is read at once.

Depending on the scanner model you can find the different resolution modes in the "General" > "Original" menu (where you can also alter between "Transparency" and "Reflective" or "Document Feeder" if your scanner supports those features).

Having selected a scan frame of your choice, clicking the zoom button will induce a new prescan of the selected area.
The zoomed high-res preview can be as large as the monitor screen, where the proportions of the scan frame determine the proportion of the new preview scan. A square-shaped scan frame results in a square-shaped preview.

One main advantage is that thanks to this new approach even large format panoramic films ** (for example 6x17 cm rollfilm-negative**) can be previewed at once in the zoomed preview.

If you want to zoom further into the zoomed preview, simply downsize the scan frame over the zoomed preview and click the prescan button again to initiate a new preview.
With a click on the zoom button (magnifying glass) you switch back the initial preview of the entire scan bed ("toggle-switch").