SilverFast®

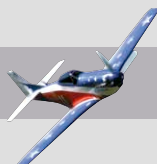## *SilverFast Ai*
SilverFast Ai Studio

LaserSoft Imaging®

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Introduction

SilverFast Ai is now in its twelfth year after its introduction in 1995. By now *SilverFast* has received so much recognition world-wide that some already call *SilverFast* "The Standard" for scan software. That is a great compliment but nothing we intend to rest upon!

SilverFast has made professional colour scanning truly manageable and results predictable.

With *SilverFast Ai* 6.5 you will also see the advent of the first *SilverFast Ai* QuickTime movies, exemplifying the powerful functions built into *SilverFast* 6.5 demonstrating how easy these tools can be used.

Karl-Heinz Zahorsky   Kiel, January 2007
President *LaserSoft Imaging AG*

SilverFast Installation

Insert your *SilverFast* installation-CD into your CD drive. The CD will open automatically.

• Under "Language" select your language. A dialogue with several choices comes up. Go on with "Next".

• Click „Install SilverFast" in the next dialogue.

• Select your scanner model and click „Next".

• The next window asks if you want to install the documentation and the QuickTime Movies. Please click "Install".

• The installation will now commence.

• For safe install please follow the recommended steps from the installer.
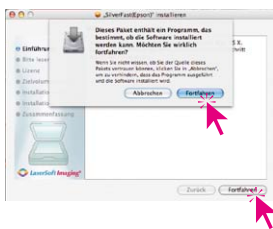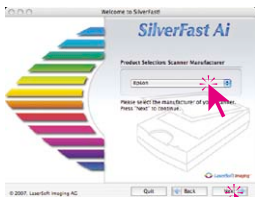
ScanPilot®

The first time you start *SilverFast*, you will be greeted by the *ScanPilot*. If you press the start-button, the scan pilot will guide you through the various tools of *SilverFast* in the recommended order. This way you'll easily get accustomed to our recommended workflow. The steps are: pre-scan, frame selection (cropping), automatic adjustment, graduation correction, size adjustment and scaling. After these steps the scan process is finished.

You can stop the *ScanPilot* any time by pressing the stop-button. At this point, you can use the *SilverFast* tools manually.
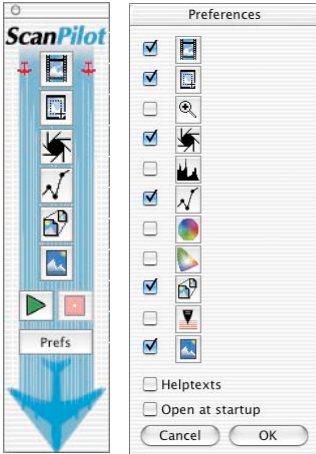
By pressing the "Prefs"-button you can expand the tools-list used by the *ScanPilot*. Click the check boxes beside the desired tool. The *ScanPilot* guides you through the professional steps to achieve best quality. You will find a tools description in this Quickstart and in the manual on CD.

Starting the ScanPilot

Stopping the ScanPilot

Prefs

SilverFast Help

Whenever you move the mouse over an icon in *SilverFast*, you will get a brief explanation at the bottom of the pre-scan window.

You can also use the question mark-icon at the upper left corner of the pre-scan window in order to access the *SilverFast* Help. This will lead you to more in-depth manuals (Acrobat Reader PDFs). By clicking the „Q"-button, the respective QuickTime movie is launched.

Extensive information about all functions of *SilverFast* can be found in the full manual. This manual is available in pdf-format on the *SilverFast-CD*.

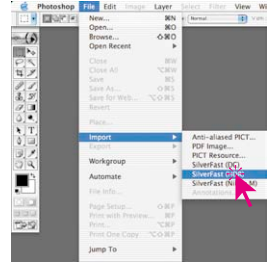The most current information about *SilverFast* can be found on our website:

http://www.silverfast.com/overview/en.html

Instructional QuickTime movies are also available there.

Quickstart

1. Start *SilverFast*

Start from Photoshop: Start Photoshop and select your scanner "*SilverFast*..." under "Import" under the "File"-menu (Windows: "File"-Menu).

Start from *SFLauncher*: Start *SFLauncher* by double-clicking the application.

Under "Plugin" select the appropriate *SilverFast Ai* version and click "Start". *SilverFast* will start as usual.

2. Serialization and Registration

The main scan dialogue comes up with the Serialization dialogue, where you input your first name, last name, company and the serial number.

This code consists of numbers between 2 and 9 (no ones and no zeros), and all letters between A and Z – except the letters "i" and "o". Click "Unlock SilverFast" once you have entered all data.

Please register your version of *SilverFast*; only then will you receive support and have access to the latest versions using the Online-Update.

Clicking the „i" button, and then hitting the „Register" button will then launch the registration procedure.

3.1 Prescan

If you use *SilverFast Ai* connected to a scanner, click onto the "Prescan" button to launch the prescan. Adjust your frame by dragging the selection marquee over the image accordingly. Make sure the marqueed frame is inside the actual image area itself.
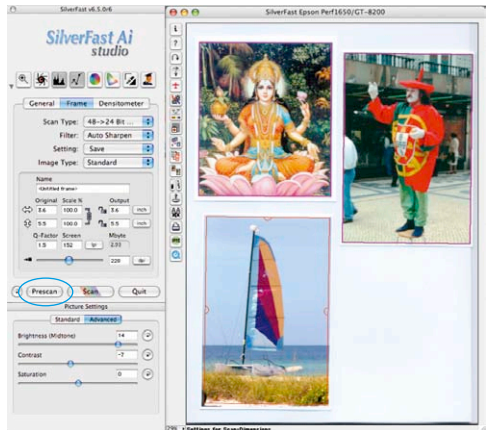
3.2 Auto-Frame Function

By this function, image frames may be generated automatically on the preview / prescan window. For this it is necessary for the images to have a certain distance between them and the outer edge. A lack of distance could hinder a clear detection of frames.

A high contrast background is helpful in reflective scans. For transparencies, using the supplied film- and slide holders is useful, since they offer an optimal contrast to the background.

Before this function is activated, a preview / prescan should be performed. Next, the function can be launched by clicking the respective button The Auto-Frame button is located in the vertical toolbar, left of the large preview window.

3.3 Auto frame rotation

Apart from the detection of image frames *SilverFast SE Plus* and *Ai Studio* v.6.5r5 or later also incorporate the ability to automatically rotate and align frames.

If the contrast between image and background are adequate, *SilverFast* will not only recognize the individual frames but will also rotate these scan frames automatically. By this, misaligned frames will automatically be aligned when scanning.

For example: A large scan frame drawn over the entire flatbed will result in *SilverFast* detecting the 4 non-aligned, individual images automatically and will draw 4 scan frames around them. Non active frames will be displayed in magenta; the active frame is displayed in red.

The frame size and the rotation can also be adjusted manually by means of the mouse. The active frame may be moved by placing the mouse over the frame edges. By means of the semi circular grabber in the frame center, it may be rotated freely.

3.4 Zoom

Holding down the "Ctrl"-key turns the mouse button into a plus-magnifier. To perform a zoom, simply keep the key pressed and drag a scan frame within the prescan window. The contents of this frame will immediately be magnified once the mouse button is released.
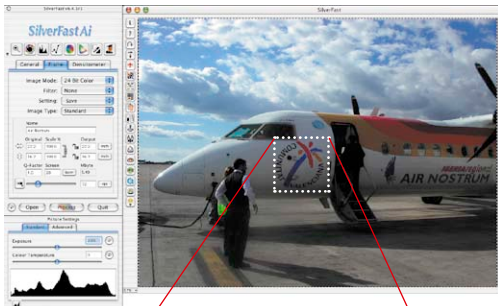
Alternatively, a preset zoom ratio can be selected in the pull down menu in the lower left of the prescan window.
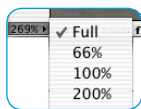
4. Image Optimization

4.1 Image Type / Auto-Adjust

Under "Image Type", make the appropriate selection to configure the "Auto-Adjust", so the automatic image control knows how to optimise the image. Immediately after the selection of an image type, the auto-adjust is applied automatically (notice how your image is optimised).

If you do not change "Image Type" selection you can press the auto-adjust icon in the tool bar to optimise the image. You'll soon notice how high lights, shadows and midtones are automatically corrected.
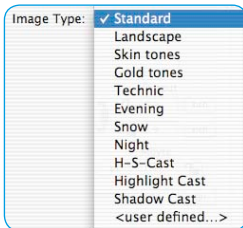
4.2 Histogram

In the histogram you can change the highlights (white point), the midtones and the shadows (black point) by dragging with the mouse on the small movable triangles.

The respective values can be monitored with the input fields below and also with the input fields above and below the gray scale bar.

You can switch the midtone characteristic by toggling to "L" or "N" (L = logarithmic and N = linear).

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Professional users can use the input fields and movable triangles "Min" and "Max" to adjust highlight- and shadow values.

The "Colour Space Compression" can also be freely adjusted with the small movable triangles.

Colour casts which may possibly be there in the image can be reduced with the slider at the bottom of the dialogue.
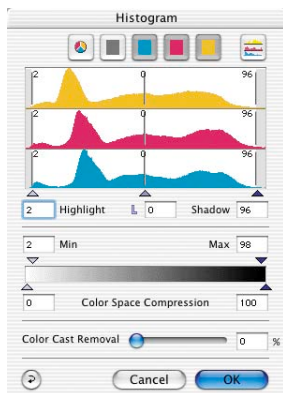
4.3 Correcting Brightness

If the image looks too bright or too dark you can open the "Gradation Dialogue" from the tool bar. Use the midtone slider to correct the overall brightness of your image.

Any correction that you perform can easily be undone by typing "Command-Z" and redone by typing "Command-Z" again ("Crtl-Z" on a Windows PC, respectively). In fact, you can toggle between the two.
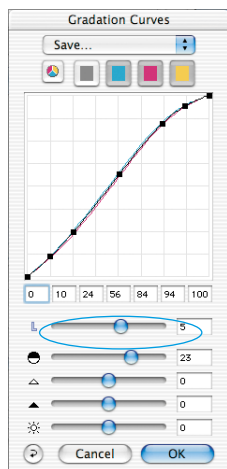
4.4 Global Colour Correction

In this dialogue, you can change the entire colour rendering of the scanned artwork.

By clicking or click dragging within the colour sphere, the colour characteristic of the scanned artwork will be moved into the selected area.

The degree of changes can be adjusted by means of the three-step slider. The lower level will produce small changes. The upper level will produce large changes.
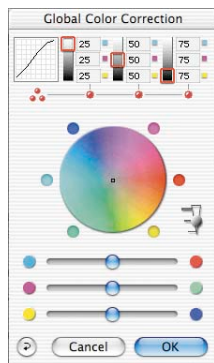
4.5 Selective Colour Correction

Open the selective colour correction from the tool bar and click into your image on the coloured object you wish to correct. *SilverFast* recognises the colour and sets the colour in the centre of the colour circle accordingly.

By clicking into the top or the bottom of the HSB-controls and holding the mouse button down, you can change the hue, saturation or luminance of the colour selected.

HSB-correction allows easy colour control. You can get more sophisticated control by typing numbers into the cells of the colour matrix or by selecting presets from the pop-up menus in the top colour patches of the matrix.

You can also use the colour circle to make corrections. Up to six corrections (for each of the RGBCMY colours) can be made at a time.
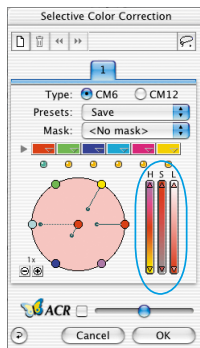
You can do complex corrections, only related to certain image regions, easily with layers and freely drawn masks.

"*ACR*" (Adaptive Colour Restoration) when checked, is a new powerful function to correct image saturation automatically by adjusting the slider.

4.6 Selective Colour to Grey Conversion (*SC2G*)

SC2G serves to selectively converting primary- and secondary colours into shades of grey.

Under "Image mode" you switch from colour to grey mode. Clicking onto the button "Selective Colour Correction" opens the *SC2G* dialogue.
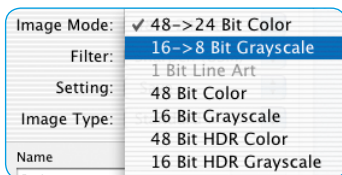
Clicking onto a shade you want to change will select the appropriate colour in the *SC2G* dialogue. Colour triangles above the colour to gray controls indicate the colour effected more visibly. Press the small top or bottom triangles on the controls. The top triangle will increase the brightness, the bottom triangle will decrease the brightness of a shade.
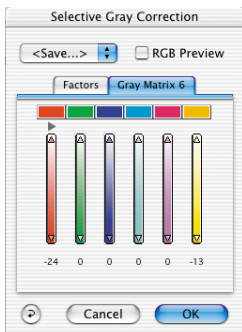
4.7 Multiple Neutralising Pipette (*MidPip4*)

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


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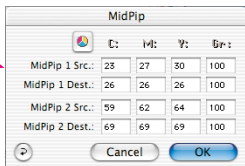
In order to fine tune a neutral point, double-click onto the pipette tool and the Midpip dialogue window will appear. The value fields show the "Before-After" RGB- or CMY-values of all neutral points. They are fully editable. *SilverFast* version 6 offers the possibility of the most sophisticated colour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

4.8 Image Dimensions

Set your image dimensions, such as output size and printing screen, as desired.
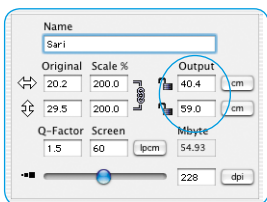
Setting the output size
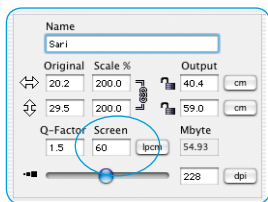
Setting the printing screen

4.9 Defining Unsharp Masking (USM)

Under "Filter", select "Unsharp Masking" to define the sharpness of your image. Since sharpness is related to image scaling and resolution, make sure you have set output size and output screen of your scan before setting unsharp masking.
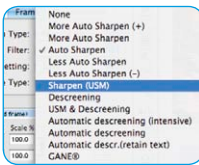
To view the sharpness of the final scan, click on "Prescan" and click into the area of interest in your image. *SilverFast* commands the scanner to pick up the selected portion from the image to judge the sharpness effect. You can change any of the unsharp masking parameters and view the effect on the image immediately.
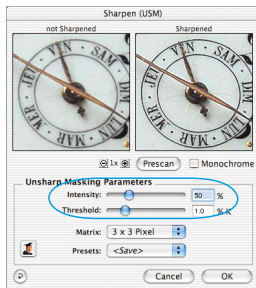
4.10 Removing the Screen from Printed Artwork

To scan artwork done with offset printing, as for example from a magazine, the scans have to be "descreened." First, select the function "descreen" in "Filter."
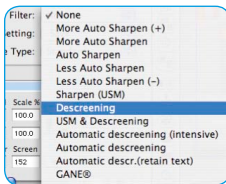
In order to generate a preview, simply click the "Preview" button within the opened dialogue. The mouse pointer changes to a square, with which a homogenous part with medium brightness of the image should be chosen and clicked. The scan starts immediately. The previously activated input field "detect screen" ensures that the correct screen is calculated automatically. The result of the descreening is displayed after the end of the final scan in the "After" window. Simultaneously, the detected screen is displayed in numerical values in the "Descreening Parameters" window.
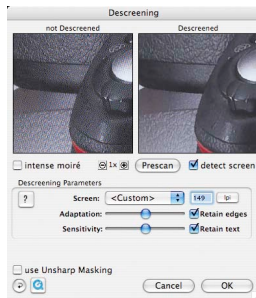
4.11 Grain- and Noise Removal (*GANE*)

The reduction of grain pattern and noise can be monitored in *SilverFast's* "Before-After-Preview" and enables a secure judgement of the final results.
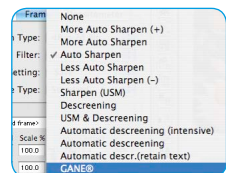
The intensity of the *GANE* filter can be easily controlled by the user with a drop-down list of presets. Additional sliders available in the expert mode enable a finer tuning to achieve the best possible result. The expert mode is only available in *SilverFast* full versions.
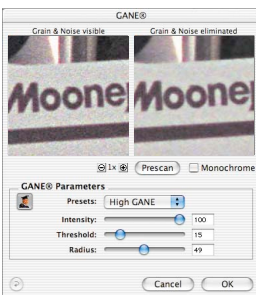
4.12 Dust and Scratch Removal (*SilverFastSRD*)

After starting *SilverFast SRD* click "Prescan" to generate a new preview scan with the current resolution set in order to show all artifacts.

The "Auto"-button tells *SilverFast* to find the best presets possible. The settings found can be optimised further.

At first select "Defect Type" and switch to "artifacts highlighted"-mode. All artifacts found will be highlighted in red colour.

You can now correct the auto settings found with the sliders "Detection" and "Defect Size". You should leave "Intensity" for the time being on "100"!

With the slider "Intensity" reduce the number of details recognized which are not artifacts (Value: < 100).

Check the overall results by selecting other image areas with the Navigator and switching the monitor modes. In order to eliminate large artifacts or scratches only in certain areas of the image, use the mask function. For complex artifacts working with "levels" is recommended. Clicking "OK" will apply the parameters set and the dialogue will be closed.
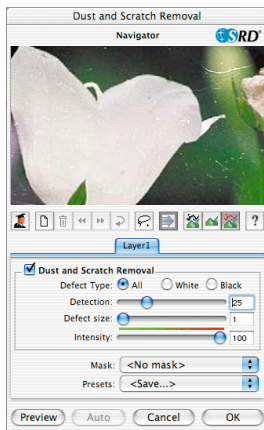
For some scanners, the "DIGITAL ICE technologies (ICE)" may be used. It works solely with the hardware of the scanner and enables the automatic removal of dirt and scratches from the image file. Depending on the scanner two intensities are available.

4.13 Select the Colour Model

By pressing the "command" key and clicking the "Scan" button a pop-up allows you to select the output colour model (PC users click with the right mouse button on Scan RGB key): RGB, ColorSync, Cie-Lab, P&P CMYK. After the selection is done, the scan button changes accordingly. Default is "Scan RGB".
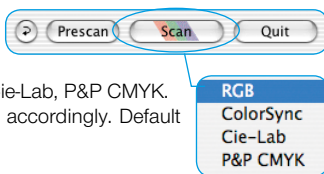
4.14 Multi-Sampling

Multiple sampling can be applied for some scanners that show a visible, strong noise in the shadow areas, in order to eliminate the artefacts.

Multi-Sampling can be activated with its own button. The number of scans per scan frame can be 1, 4, 8 or 16 (the number depends on the scanner). A small number in the button will show the number of sample scans.

Please note that the entire scan time increases proportionally to the number of sample scans.

4.15 Multi-Exposure (Only available with dedicated scanners and *SilverFast SE Plus ME* or *SilverFast Ai Studio ME*)

SilverFast's Multi-Exposure generates 48bit RAW scans into which variable exposures may be calculated.

With this feature, the supported film- and flatbed scanner's dynamic range is significantly increased and the noise of the CCDs effectively minimized. Hence, more details will become visible, which is especially true for the dark parts of an image.

In comparison to Multi-Sampling, there is one main advantage: Multi-Exposure reaches the same quality much faster! The slower 8x or 16x Multi-Sampling processes become completely obsolete, since even a 2x Multi-Exposure reaches a higher quality.
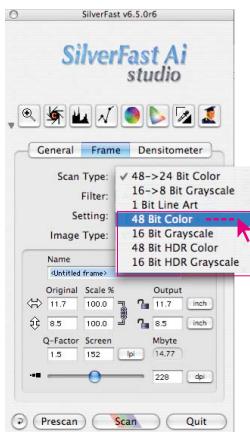
Multi-Exposure only operates in transparency mode when scanning negatives or slides. In order to utilize Multi-Exposure the scanner must be set to 48 Bit or 16 Bit mode. This can be done in the main menu under „Scan type".

Activation and use of Multi-Exposure is simple: The button for activating the Multi-Sampling can be found on the left side of the large Preview window of *SilverFast Ai*... the button for Multi-Exposure is underneath it.

Example: Switching from 4x Multi-Sampling to 2x Multi-Exposure. One click deactivates Multi-Sampling and activates 2x Multi-Exposure.
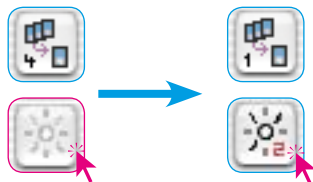
4.16 AACO (Only available with *SilverFast SE Plus* or *SilverFast Ai Studio*)

SilverFast AACO is an excellent tool for the correction of dark, too much contrast bearing image parts while preserving the details in the highlights.

AACO is activated by clicking the respective button located in the vertical toolbar, left of the preview window.
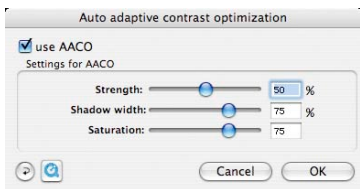
A dialogue will open, and the therein set parameters are directly projected onto the current image.

4.17 Scan

In order to start scan click on "Scan"-button and the scan into the image application or to disk will start.
For further options such as batch scanning, look up the main manual PDF on the CD.

4.18 Reset / General Reset

In order to reset the correction within the active scan frame, click the "Reset"-button in the *SilverFast* dialogue window.
In order to reset all *SilverFast* correction settings, press the "Shift" key and click on the "Reset-All"-button in the *SilverFast* dialogue window.
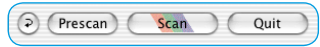
4.19 Plug&Play CMYK

If you want to use "Plug&Play CMYK" output, make sure a colour separation profile e.g. "Eurostandard coated.icc" is loaded within *SilverFast*.

If the "Plug&Play CMYK" menu choice is grey so you cannot select it, choose a separation profile under the "Plug&Play CMYK" menu in the "Options..." dialogue window.
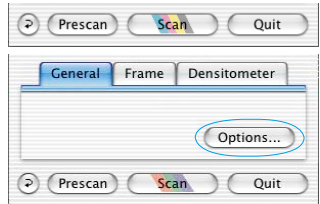
Attention!

To work accurately, select the same "Separation profiles" or "CMYK-ICC profiles" or "Output RGB profiles for RGB printers" in Photoshop and in *SilverFast*.
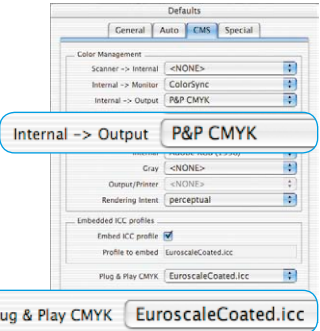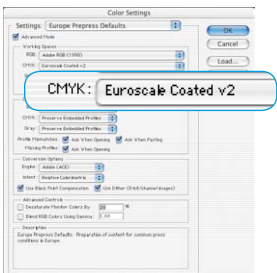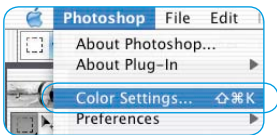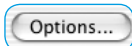
Colour management

Basic set up for correct matching of colours between Photoshop and *SilverFast* Ideally, the viewed colour of the screen image should be the identical for *SilverFast* and Photoshop. However, that can only happen when an identical working colour palette is used in both programs. If a self defined working colour palette is used, it should first be copied into the system folder containing ColorSync profiles (Windows: ICM profiles). You will find detailed information on our web-site: www.silverfast.com and in our manual.
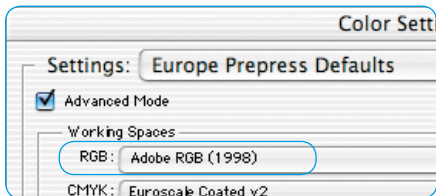
Photoshop
The set up of a working colour palette is done in „file / colour set up / RGB". Here, for example, „Apple RGB". A self defined working colour palette can be saved in the dialogue.

SilverFastAi
The set up for a working colour palette is done in „Options... / CMS (Win: ICM)" at colour management / Internal>Monitor" and „Profiles for ColorSync / Internal".
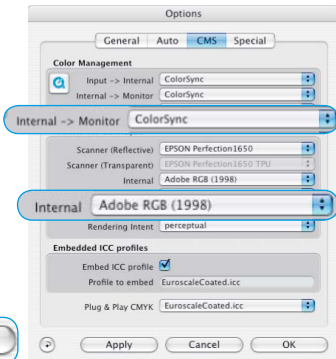
Calibrating your scanner with *SilverFast* IT8 calibration

IT8 target calibration is the industry standard for calibrating input devices. Now *SilverFast* has integrated (optional) a professional tool for calibration and for the creation of ICC profiles to be used with Apple's ColorSync 3 or under Windows with ICM 2.0. To order this upgrade, contact *LaserSoft Imaging AG*.

SilverFast has made the process of IT8 calibration very convenient – all steps are performed automatically by the software, just follow the instructions outlined below.

❶ Position the IT8 reference chart on your scanner bed.

Make sure that the IT8 target is positioned straight within the normal scan area, preferably where the scan starts. Avoid those areas which are reserved for scanner internal calibration. The orientation of the target should be as shown on the right.
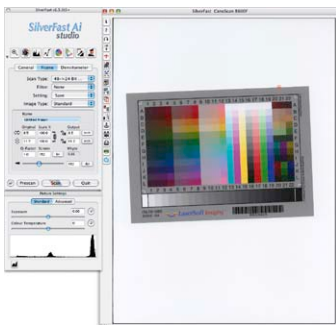
❷ Now click the IT8 calibration button.

❸ After that, the IT8 calibration runs fully automatic.
After the calibration has been completed you will get the message "Calibration has been successful...".

❹ Calibration is now active. The IT8 calibration button is now coloured and no longer grey.

For a subsequent activation of the calibration, please choose the following colour management settings:
Choose the option "ColorSync"(Windows "ICM") in the "Input -> internal" menu.
After this, choose the correct calibration profiles for both transparent and reflective images.
After clicking the "OK" box of the CMS dialogue, the IT8 Calibration is activated.
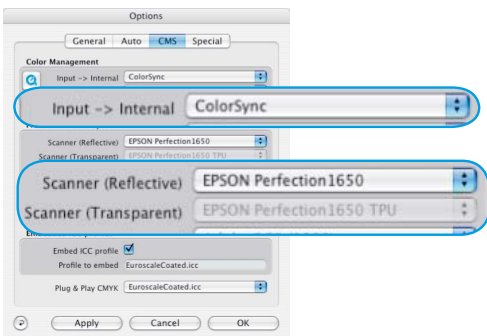
Options*

Before you start working with *SilverFast*, please set important preferences under the "Options..." dialogue. These preferences will be automatically incorporated into any future scans performed.

⚠ *** Attention !** The "default dialogue" windows differs from scanner to scanner and some features are only available for certain scanners or certain imaging software. The following parameters are set:

The brief instructions below outline the most important pre-settings. A complete explanation of all functions can be found in the general *SilverFast* manual.

General defaults

• **Interpolation**
Switching between standard interpolation and the higher-order antialiasing interpolation.

• **Q-factor**
The Q-factor is the quality factor for an image. The range is from 1 to 2.5. Please refer to manual addendum (Calculating the scan resolution).
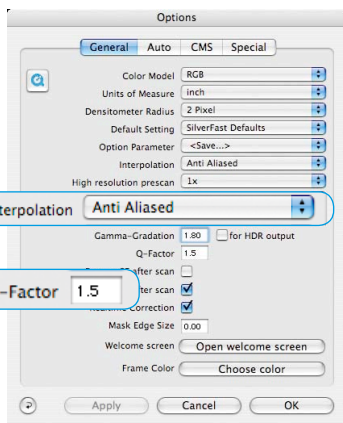
Auto defaults*

• **Auto Contrast**
The best contrast setting of the picture viewed is automatically chosen upon activation.
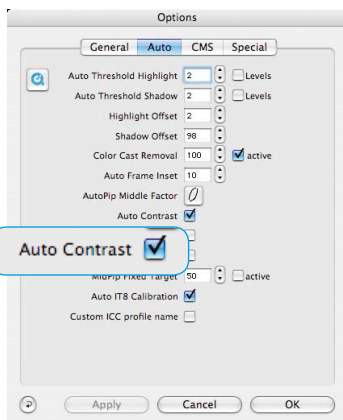
CMS (Colour management) defaults*

### Colour Management

- **CMS Scanner > Internal**
  Here the preferred model for correcting the colour deviations of the current scanner can be selected. The choice is between "none" and "ColorSync" calibration.

- **CMS Internal > Monitor**
  Here the matching from the internal colour space of *SilverFast* to the current monitor is being defined. "None!" is if the user does not want any matching. "Automatic" is for Photoshop. (Please check the internal ICC profile set in *SilverFast* should be the same as the one allocated in Photoshop's internal colour space). "ColorSync / ICM" is for those applications that do not supply matching from inside the application but the user does want colour matching.

- **CMS Internal > Output**
  The preferred system for defining the output colour space generation can be chosen here. Select "RGB" for no output matching. "ColorSync / ICM" if you want ColorSync / ICM to do the output matching. "Cie-LAB" if you want to generate device independent colour space. "P&P CMYK" for *SilverFast's* own powerful separation to CMYK with Photoshop matching.
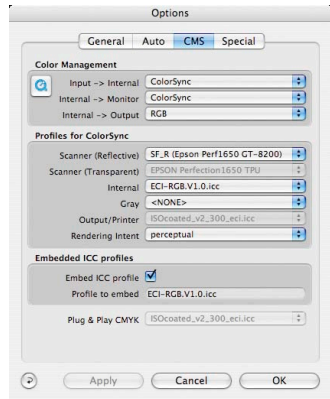
Profiles for ColorSync / ICM

- **Scanner (Reflective)***
  ICC profile for the reflective unit of the scanner.
- **Scanner (Transparency)***
  ICC profile for the transparency unit of the scanner.
- **Internal**
  ICC profile for the internal colour space.
- **Output / Printer**
  ICC profile for the printer.

Embedded ICC Profiles

This option enables the user to pass the image data to an application which would do automatic matching with the embedded profile. When a TIFF-file is generated from *SilverFast* the ICC-profile is embedded into the TIFF data.

Plug + Play CMYK

The ICC profile Plug&Play CMYK separation is chosen here.

Registration

Please register take a minute to this software. It will enable you to download free updates for a limited time, and to contact technical support by e-mail or fax. You can register on-line at

http://www.silverfast.com/reg/en.html

Your personal information will be kept confidential.

En

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