Calibration of your Scanner using *SilverFast* IT8-Calibration

IT8-calibration button, will open the IT8 dialog.

IT8-button coloured = calibration is active.

IT8-button grey = calibration is disabled.

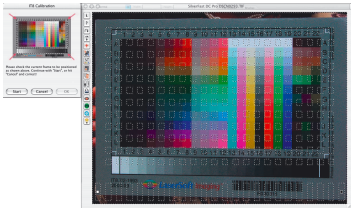
⚠ *The IT8-button is NOT visible when this function is not activated in the software!*

SilverFast Ai for some high-end devices features a professional tool for calibration and generation of input ICC-profiles. The calibration can be made for reflective and transparency positive originals. The calibration is NOT applicable to negative originals.
The IT8-calibration is an additional function in the *SilverFast* software. It is usually an option to the software and therefore has to be activated separately. In certain *SilverFast* versions - for selected scanners - this function is active by default. In cases where this function must be activated separately, a second CD Rom is required for this procedure - the "*SilverFast* Feature-CD".
The separate activation procedure is described in chapter "SilverFast Feature-CD".
SilverFast has made the process of IT8-calibration very convenient – all steps are performed automatically by the software, just follow the instructions outlined below.

1. **Position the IT8 reference chart on your scanner bed.**
   Make sure that the original is positioned inside the scan area of the scan bed. Avoid positioning on areas at the rim of the scanner bed, with some scanners this areas must be kept clear for hardware calibration. The orientation of the target should be as shown on the left.

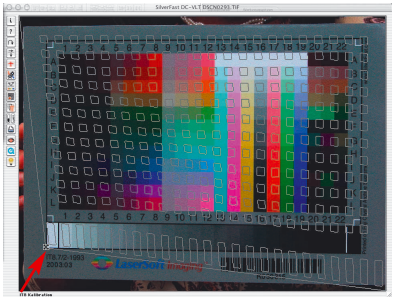
2. **Click "prescan" (the scanner performs a prescan).**

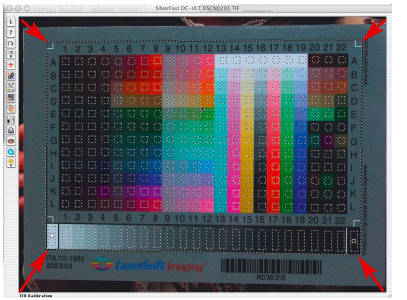
3. **Click the button „Calibration"**

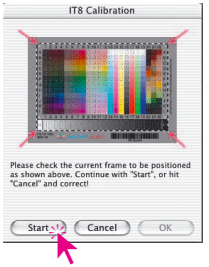


4. **The window "IT8-calibration" pops up**
   The preview window and the grid will open.

Position the grid in such a way, that all edges are precisely covering the IT8 target.







5. Start the calibration

If the frame is correctly set up, the calibration can commence by clicking the “Start” button.

SilverFast will now search for the respective reference file for the chosen IT8 target.

6. Identifying the IT9 target and searching for the correct reference data file.

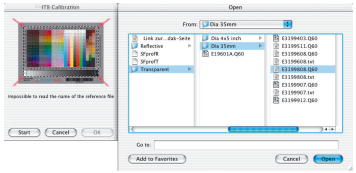
6a. *SilverFast* locates the reference data file on its own

This usually happens very quickly and runs automatically; the IT8 target is identified by the barcode on its front. *SilverFast* then searches for the respective reference data file, and then launches the calibration.

6b. *SilverFast* cannot find the reference data file

The automatic search is started within the installed folder for reference files. In case no matching data file is found, *SilverFast* will make an internet connection to the *LaserSoft Imaging* homepage, and search for the data file there. The reference file will quickly be loaded (Size 20 to 30kB). The calibration will then be commenced.

In case no matching reference file is found, an options dialog is opened. This may occur if the user has chosen a non *LaserSoft Imaging* IT8 target which does not contain barcodes. In this case, please locate the matching reference file manually.



Attention! Each reference data file contains exact information about the IT8 target. This means that for each IT8 target there is only one matching reference file. Not matching the exact targets and reference files will lead to a wrong calibration and false results.

SilverFast software usually installs some known reference files automaticly inside the “IT8 Reference” folder, a subfolder of the *SivlerFast* folder.

In case the reference file is not installed, you will find more filed on the *SilverFast* installation CD, as well as on out website:

http://silverfast.com/download/it8calibration-en.html

You can easily identify your reference file by its file name. That name is either a so-called “charge number” or a production date printed either directly on the calibration target or on its protective sleeve or below the barcode.

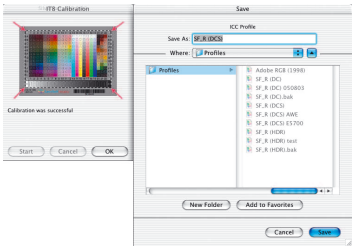
Make sure your reference file (textfile) corresponds to the production charge of your IT8-calibration target (when in doubt, ask target manufacturer)!

Reference files for original KODAK reference targets (image) can be found here:
ftp://FTP.Kodak.com/GASTDS/Q60DATA/

Note!
When using IT8-calibration make sure you are only using targets with the correct reference data of the appropriate film manufacturer (e.g. Kodak, Agfa, Fuji).

For calibration in reflective mode, please make sure to select the corresponding reference file for reflective targets. The same applies for transparency calibration accordingly.

Confirm your choice with a click on the “Open”-button.



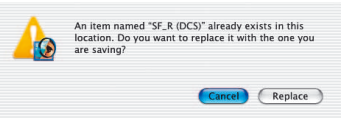
7. Saving the ICC profile

After the calibration has been completed you will get the message “Calibration has been successful”.

You’ll then have the option to save the result of the calibration as an ICC-profile for system-wide colour management. Name and location of the profile can be selected by the user.

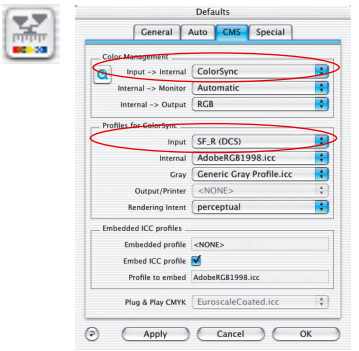
Close the dialogue window by clicking “OK”. A new prescan will be launched simultanously to update the preview.

If the name of the profile just exists you are asked for replacing the just existing older profile.



8. Calibration is now active. The IT8 calibration button is now coloured and not longer grey.

Attention!



For a subsequent activation of the calibration, please choose the following Color Management settings:
Choose the option “ColorSync”(Windows “ICM”) in the “Scanner-> internal” menu.
After this, choose the correct calibration profiles for both transparent and reflective images.
After clicking the “OK” box of the CMS dialog, the IT8 Calibration is activated.

Differences in calibration between a scanner and a digital camera

When calibrating a digital camera, several factor have to be taken into account.

The great advantage of scanners is that they work with almost constant conditions: it has an almost constant light source, a fixed colour temperature and a constant distance between the object and the sensor, as well as an absolute array between object and sensor.

This is completely different with digital cameras! Nothing is really constant or standartised, leaving the camera much more flexible and therewith hard to calculate.

An IT8-calibration can be performed but, strictly speaking, lasts only as long as no changes are made to the surrounding factors.

These conditions are generelly only found in foto-studios , Tabletop or during repro-photography. They are stongly variable when working with changing light conditions, outdoor photography, etc.

Each deviation of the factors makes the calibration work for only one single photo. If a light source is moved in a photo studio, a new calibration-photo is to be made. In order to do this, simply place a suitable IT8-Target on a prepared stand into the photo to be taken, and capture the IT8-Target in the photo. Then remove the target from the set, and re-shoot the photograph. By this method, two photos are taken, first one for calibration and after that the actual photograph. Professionals know the procedure with grey card tests – the objective is the same with the steps described here.

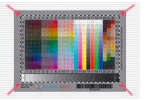
Sequence of IT8 calibration

A ssummerized run through the calibration process in the *SilverFast* software.

1. place the IT8-target into scanner and align the target

2. initiate a prescan

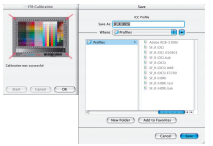
3. click once on IT8-calibration button (a dialog opens).



4. in preview window, position the grid exactly over the IT8 target

5. click once on “Start“-button
(if a dialog opens: browse to location of corresponding IT8-refernce file and select it. Confirm selection by clicking the “Open“-button.)

6. The IT8-calibration process itself runs automatically.
The IT8 dialog window informs you about the progress of the calibration process.



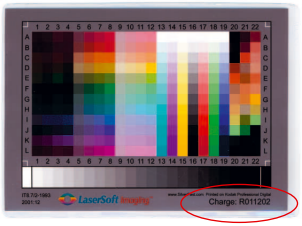
7. Save the result of the calibration as ICC-profile for system-wide colour management.

8. The IT8-calibration process is completed and automatically set active.

Examples where to find the production charge number on IT8 targets of different manufacturers.

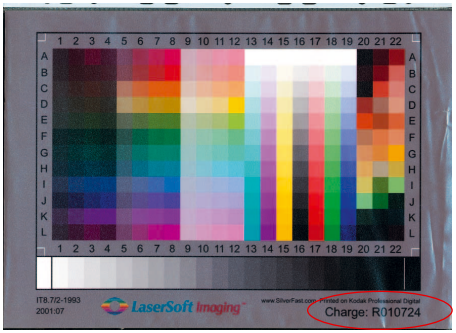
LaserSoft Imaging target
35mm, transparent,
charge number is on slide fmount.

LaserSoft Imaging target
4x5 inch, transparent,
sticker on the protective sleeve.

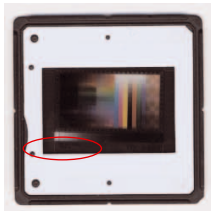


LaserSoft Imaging target
5x7 inch, reflektive,
written directly on the target - buttom right.

Kodak target
35mm, transparent,
reference is date printed direclty on the target and also on the slide mount.



LaserSoft Imaging target
DIN A4, reflektive,
printed directly on the target - buttom right.



C-ROES target
35mm, transparent,
reference is date printed direclty on the target

C-ROES target
DIN A4, reflektive,
printed directly on the target - buttom left.

Non-calibrated Scan

Calibrated Scan (IT8-calibration)