



Digital Archives must reliably represent the physical archives, including accurate color matching between original and copy. Calibration of screen and digitization equipment is necessary to achieve correct digital coloring. The following document provides instruction for calibrating scanners using *MonacoEZcolor*. These procedures are implemented by **Purdue University Libraries Archives & Special Collections** in order to maintain the accuracy, quality, and overall integrity of the digital archives.

Purdue University Libraries Archives & Special Collections
Instructions for Calibrating Scanners
using MonacoEZcolor



<http://www.lib.purdue.edu/spcol>

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Prepared for in-house use by Liz Erlewine under the supervision of Carl Snow, Digital Initiatives Librarian, and Sammie Morris, Archivist.

Please follow the instructions very carefully.
Digitization standards must be followed.

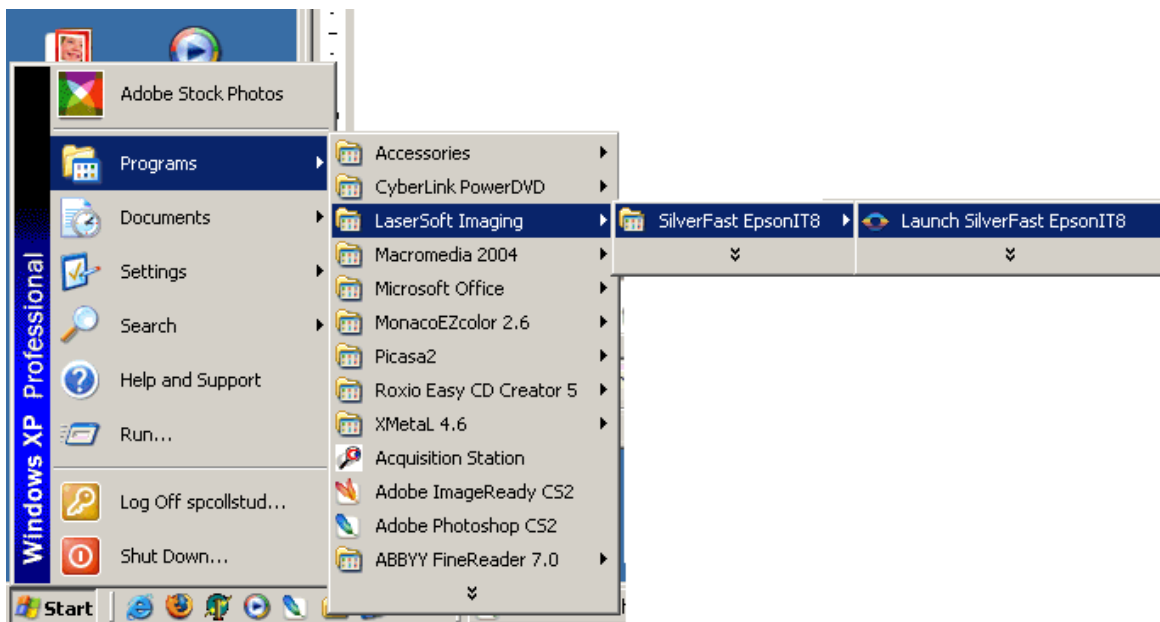
BEFORE YOU CALIBRATE

- Turn off all of your scanner's automatic correction options (*see below*).
- Turn off all of your scanner's color management options (*see below*).
- Make sure the scanner is connected, has been on for 30 minutes or more, and the glass is clean.
- Set the *SilverFast Ai* scanner software to scan at **200 dpi**
- **Have supplied IT8 Target ready** (*See Digital Initiatives Librarian for IT8 Target*).

OPEN SILVERFAST AI

To open *SilverFast Ai* scanner software:

Click on **Start**, then **Programs**, then *LaserSoft Imaging*; then click on *SilverFast EpsonIT8*, and **Launch SilverFast EpsonIT8**.



Or, open *SilverFast Ai* through *Adobe Photoshop*:

Open *Photoshop* by clicking on the shortcut on your desktop, or go to **Start/Programs/Adobe Photoshop CS2**.

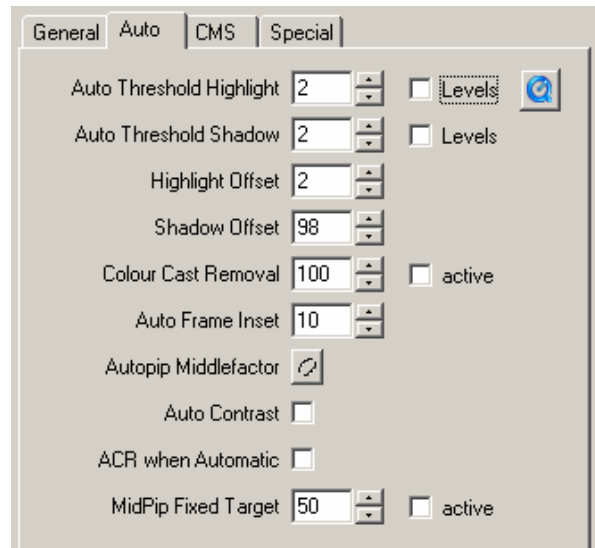
Once *Photoshop* opens, click on **File**, then **Import**, and then *SilverFast Ai...*

AUTOMATIC CORRECTION OPTIONS: OFF

To turn off your scanner's automatic correction options, do the following:

Once *SilverFast Ai* is open, click on **Options**, and then select the **Auto** tab.

Remove all check marks so that no auto options are turned on (shown at right).

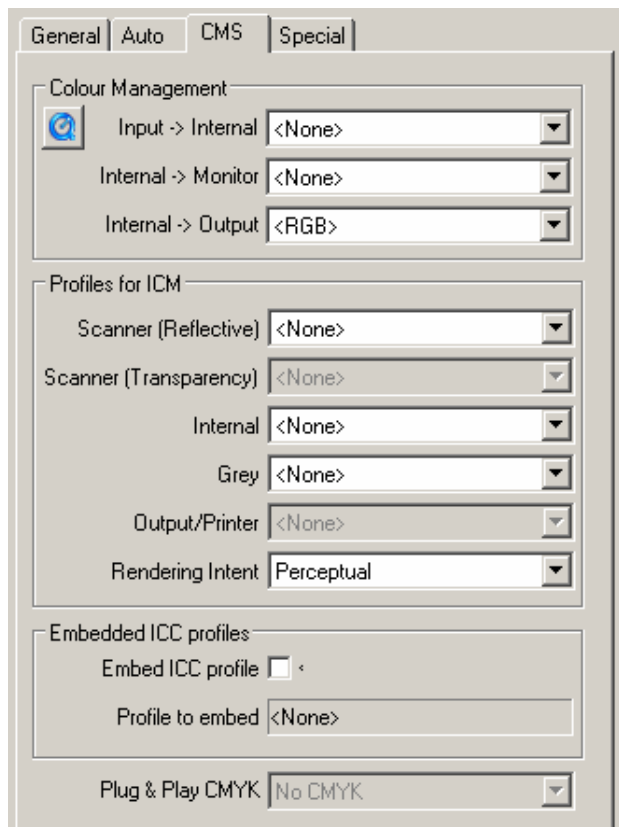


COLOR MANAGEMENT OPTIONS: OFF

To turn off your scanner's color management options, do the following:

Once *SilverFast Ai* is open, click on **Options**, and then select the **CMS** tab.

Change color management settings to **None** so that your screen matches the settings shown here.

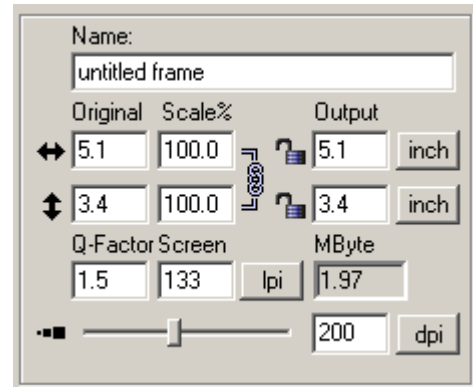


SET SCANNER TO 200 DPI

To change your scanner settings to scan at 200 dpi, do the following:

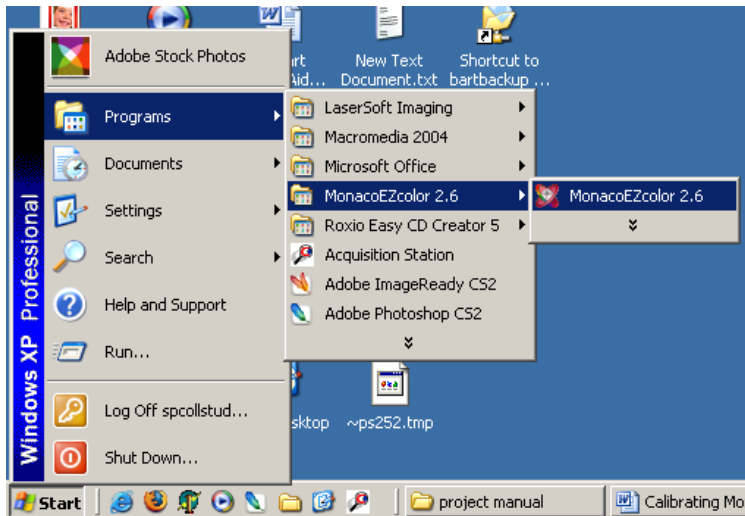
Open *SilverFast Ai...*

Under the Frames tab, change the dpi to 200.



CALIBRATING WITH MONACOEZCOLOR

To open *MonacoEZcolor*, click on **Start**, then **Programs**, then *MonacoEZcolor 2.6*, and again *MonacoEZcolor 2.6*



When *MonacoEZcolor* opens, select **Create Input Profile**.

The next screen will display the **Before You Begin...** notes. Make any necessary adjustments and advance to the next screen.



TARGET

Select the correct target, **usually 5X7 for reflective material**. (*Reflective is used for photographs, printed documents, and other opaque materials; transparency targets are used for slides and transparent materials.*)

Follow the onscreen instructions, carefully placing the appropriate **IT8 Target** on the document table (scanning bed). (*Ask the Digital Initiatives Librarian for the IT8 Target, found in the MonacoEZColor software case.*)

Make sure the target is positioned correctly on the scanner.

The target should be face down. Align the edges with two edges of the document table.

Close the scanner cover.

You are now ready to input the target.



SCANNING

1. Click **Twain Acquire**.

Input the target

Before you proceed, note the following:

1. Set the scanner's resolution to 200 dpi.	2. Prescan the target and crop the prescan to the edges of the IT8 target before performing the final scan.	3. Write down your scanner settings. You will need to apply these settings each time you scan an image for use with this profile.
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If you would like to scan the target directly into MonacoEZcolor, click "TWAIN Acquire."

2. Select **SilverFastEpsonIT8** from the list.
3. **Prescan** the **IT8 target**.
4. Crop the prescan selection to the edges of the image.
5. Rotate the image if necessary.
6. **Scan** the image.
7. Quit **SilverFast Ai**

The next screen will display a preview of the target as you have scanned it. Make sure that the image matches the thumbnail shown onscreen and is not poorly cropped, sideways, upside down, or reversed.

If there are any problems with your scan, click the back arrow button and rescan the target, making any necessary corrections.



If the scanned target looks correct, advance to the next screen.

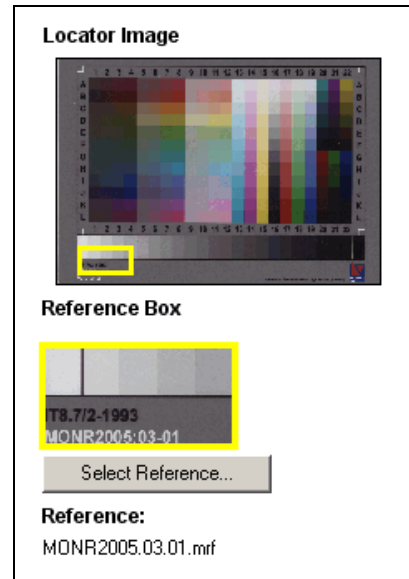


REFERENCE FILE

As stated in *MonacoEZcolor*, every IT8 target has an associated reference file that contains the measured data of each color patch on the target.

Click the **Select Reference...** button.

Browse to select the reference file that matches the reference number printed on the target you have scanned.



Once the reference file matches the image shown in the **Reference Box**, move on to the next screen.

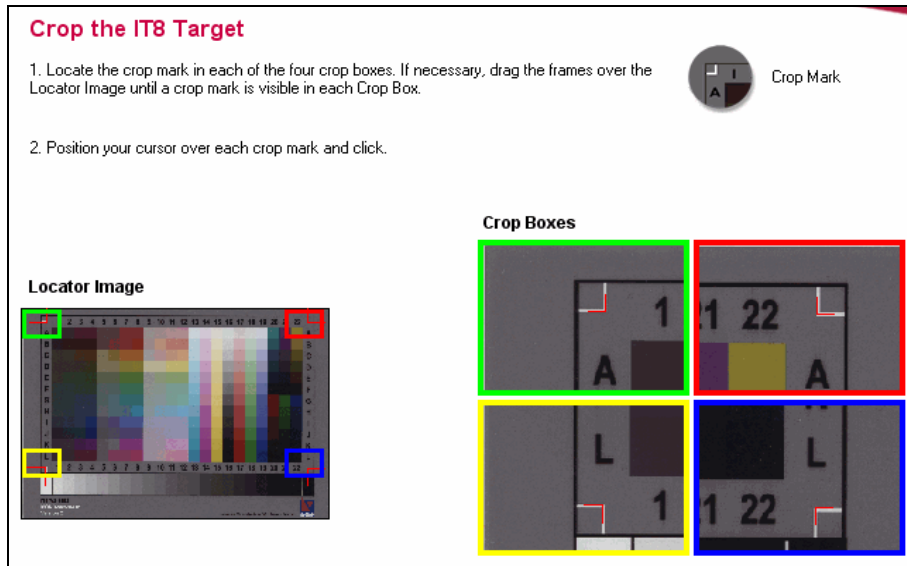


CROP TARGET

You may get a message indicating that *MonacoEZcolor* is having trouble locating the crop marks in your scan.

If this happens, you will be taken to a screen titled **Crop the IT8 Target**.

Follow the onscreen instructions, using your cursor to select the corners in the four Crop Boxes.



SAVING FILE

Once you have set the crop marks (if necessary), the software will calibrate the scanner and you are ready to save the scanner profile.

Save the profile using the following naming convention:

Epson Expression Scanner:

Epsonexpscan(yyyymmdd).icm

Epsonexpscan(20060531).icm

Epson Perfection Scanner

EpsonPerscan(yyyymmdd).icm

EpsonPerscan(20060531).icm

AFTER YOU CALIBRATE

Once you have finished calibrating your scanner, remember to put the IT8 Target file back in the software case and return it to its proper storage location.

You must also change your scanner back to the original settings.

AUTOMATIC CORRECTION OPTIONS: ON

Open *SilverFast Ai...*

Click on **Options**, and then select the **Auto** tab.

Add check marks to turn auto levels on so that your settings match the image shown here.

Auto Threshold Highlight 2 Levels

Auto Threshold Shadow 2 Levels

Highlight Offset 2

Shadow Offset 98

Colour Cast Removal 100 active

Auto Frame Inset 10

Autopip Middlefactor

Auto Contrast

ACR when Automatic

MidPip Fixed Target 50 active

COLOR MANAGEMENT OPTIONS: ON

Open *SilverFast Ai...*

Click on **Options**, and then select the **CMS** tab.

Change color management settings so that your options screen matches the settings shown here.

Scanner (Reflective) should be set to your new profile.

Colour Management

Input -> Internal Image Colour Matching (ICM)

Internal -> Monitor Image Colour Matching (ICM)

Internal -> Output <RGB>

Profiles for ICM

Scanner (Reflective) epsonexpscan(20060531).icm

Scanner (Transparency) <None>

Internal Adobe RGB (1998)

Grey Black/White

Output/Printer <None>

Rendering Intent Perceptual

Embedded ICC profiles

Embed ICC profile

Profile to embed Adobe RGB (1998)

Plug & Play CMYK No CMYK

CALIBRATION COMPLETE

You have now successfully calibrated your scanner.