

Target Practice Makes Perfect

A Guide for Color Management in Digitization Labs

Why is color management important?





Color Incorrect



Color Correct

How do you manage color?

Reflective Materials:

Color Space and File Format:

Archival scans require 24 bit, Adobe RGB 1998, and Uncompressed TIFF

Web use derivatives require sRGB and JPEG at desired size

Printed Materials:

400ppi for all materials larger than 3" x 5"

800ppi for all materials smaller than 3" x 5"

Photographic Prints:

600ppi for all materials larger than 3" x 5"

1200ppi for all materials smaller than 3" x 5"

Books:

400ppi for all books when open larger than 3" x 5"

800ppi for all books when open smaller than 3" x 5"

Transparent Materials:

Color Space and File Format:

Archival scans require 24, bit Adobe RGB 1998, and Uncompressed TIFF

For B&W Film use 8 bit Grayscale and Uncompressed TIFF

Web use derivatives require sRGB and JPEG at desired size

35mm Film - 4000ppi

120mm Film - 2400ppi

4"x5" Film - 1200ppi

5"x7" Film - 900ppi

8"x10" Film - 600ppi



Epson 11000XL Flatbed Scanner



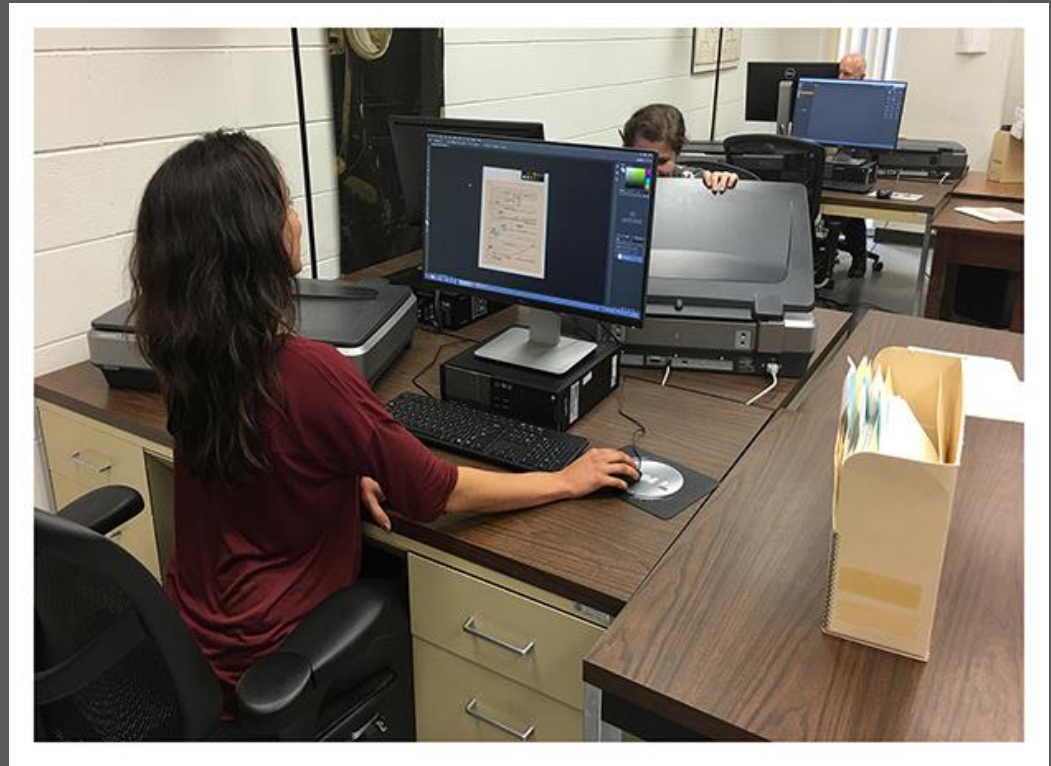
I2S Digibook Quartz Planetary Scanner



Digital Transitions Reprographic System



<http://tundragraphics.com/galleries/uconn-digitization-and-conservation-labs-2015/>



<https://wikis.utexas.edu/display/HRCDigitalCollectionsServices/Digitization+Lab>

Set your equipment to your environment.



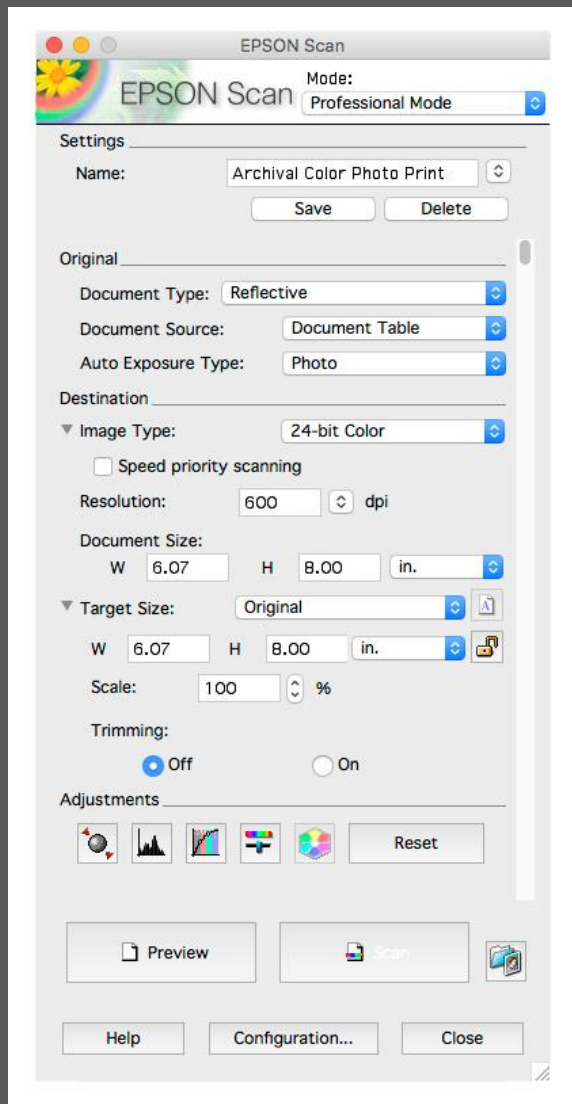
X-Rite i-1 Display Pro



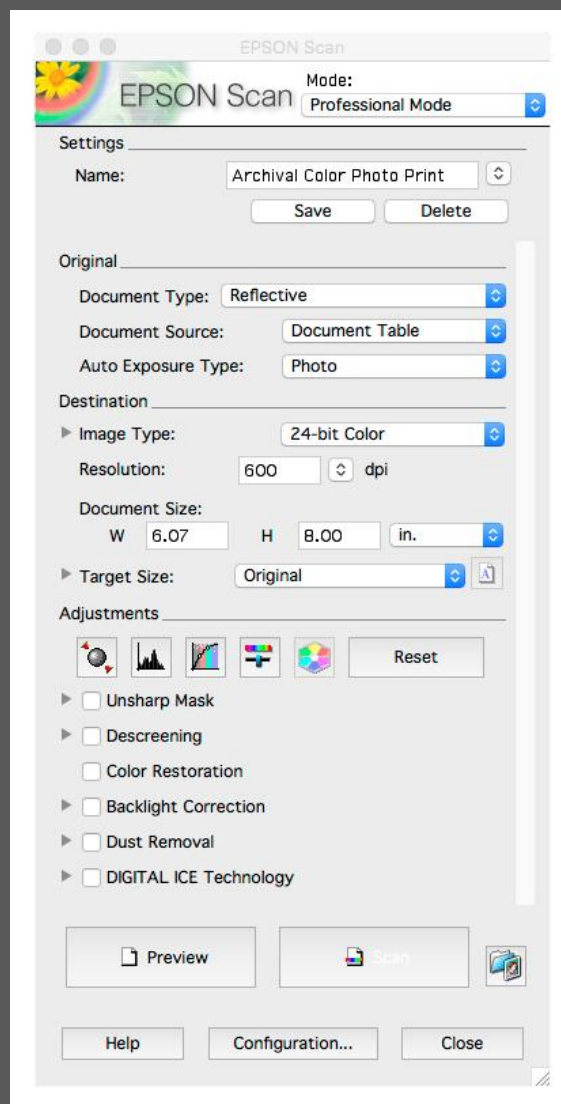
X-Rite Color Munki Display

Calibrate your scanners.

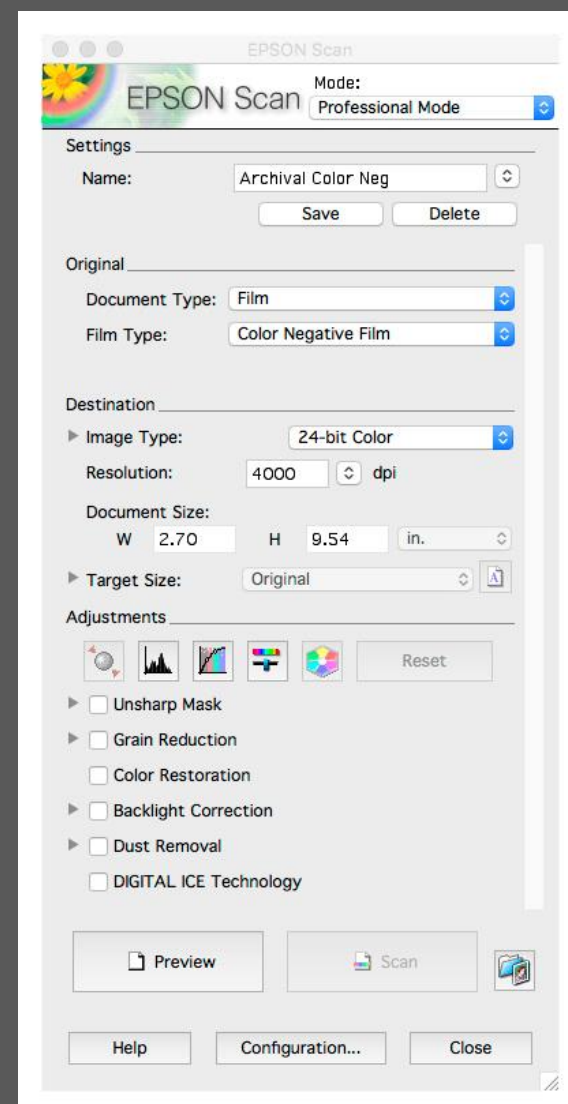
Set your scanner settings.



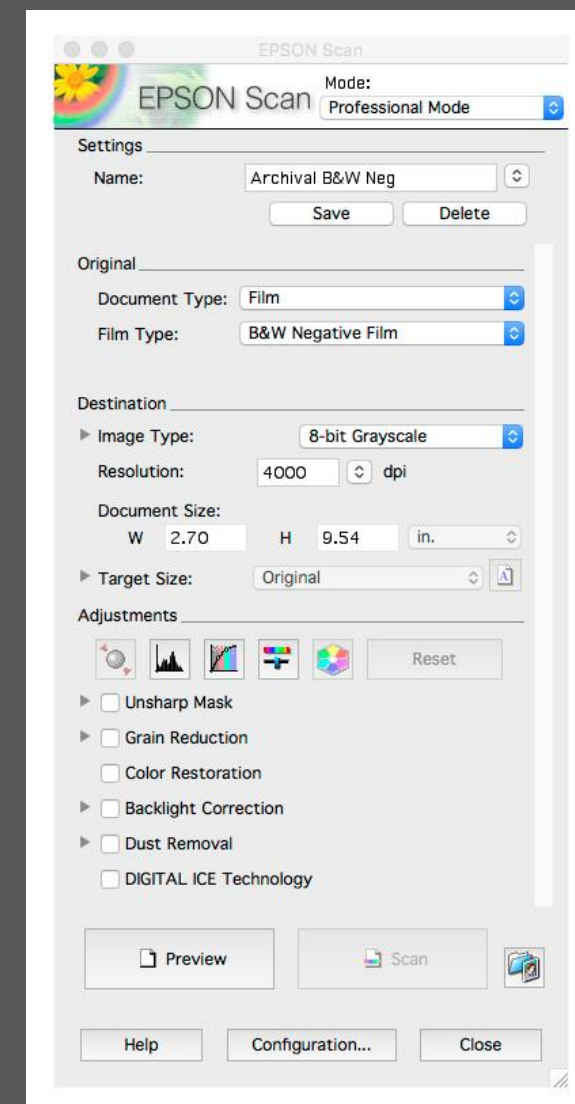
Speed Priority and Trimming off



Adjustments all unchecked



Archival Color Neg



Archival B&W Neg

File Save Settings

Location

☐ Documents

☐ Pictures

☒ Other: Archival Scanning Choose...

File Name (Prefix + 3-digit number)

Prefix: Start Number:

Image Format

Type: Options...

Details: Byte Order: Windows
Compression: None
Embed ICC Profile: ON

☐ Overwrite any files with the same name

☐ Show this dialog box before next scan

☐ Open image folder after scanning

☐ Show Add Page dialog after scanning.

Help Cancel OK

File Save Settings

Configuration

Preview Color Film Size Other

☐ Color Control

☐ Continuous auto exposure

Display Gamma:

Auto Exposure Level

Low High

Recommended Value

☒ ColorSync

Source (Scanner):

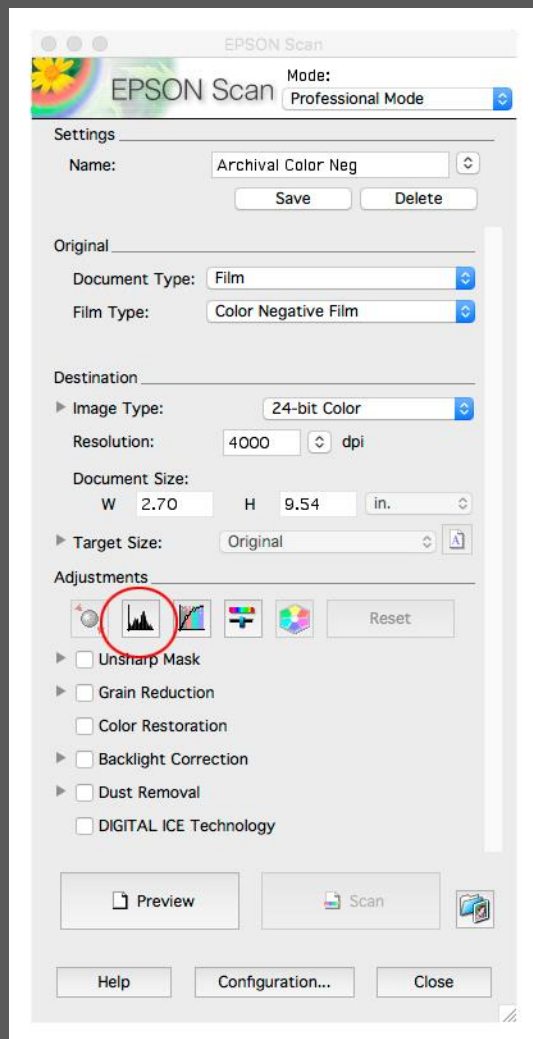
Target:

☐ Display preview using monitor compensation

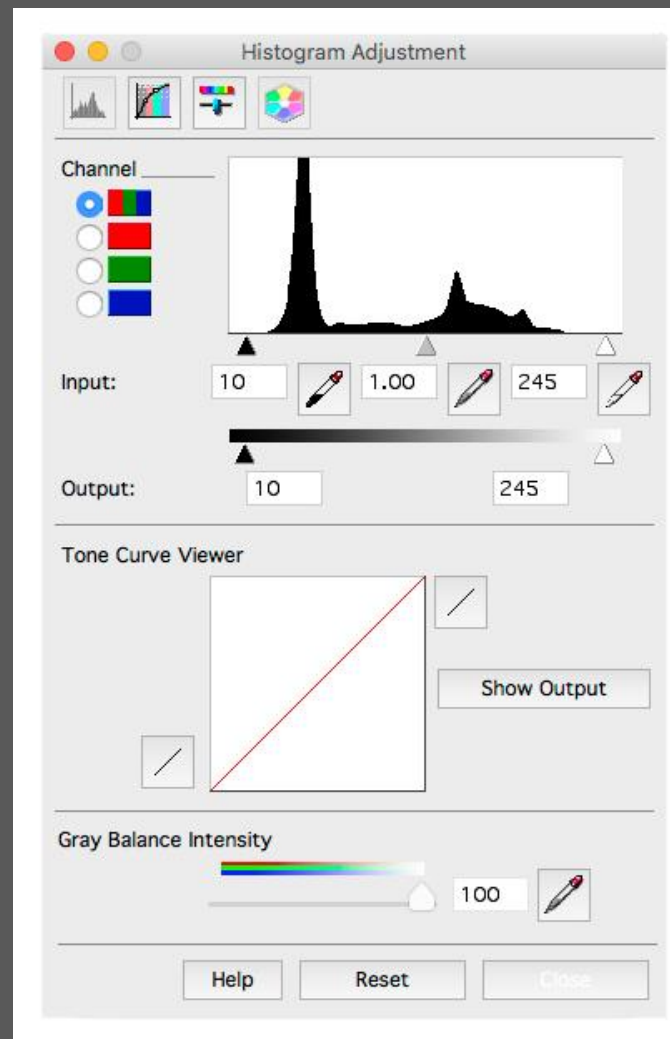
☐ No Color Correction

Help Cancel OK

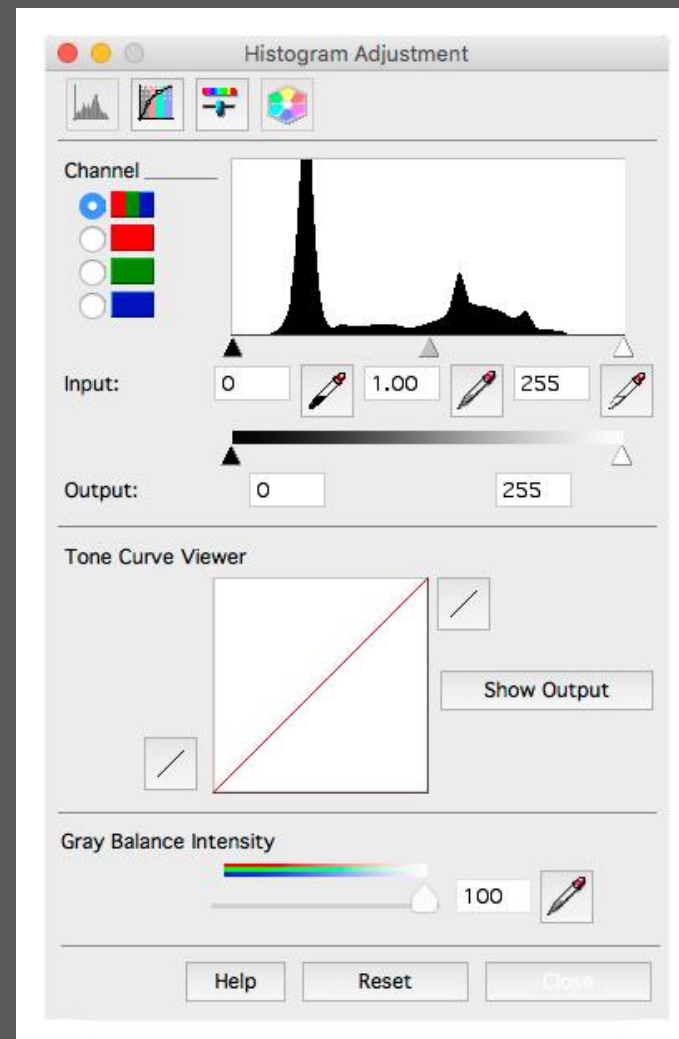
Configuration



Main Panel

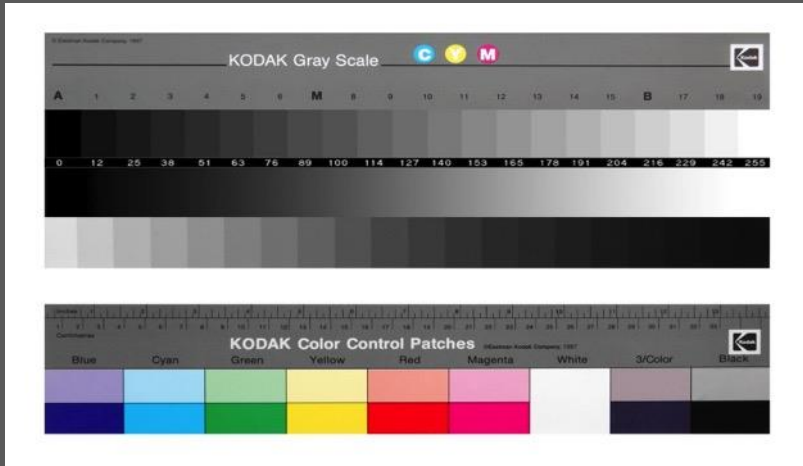


Default Settings

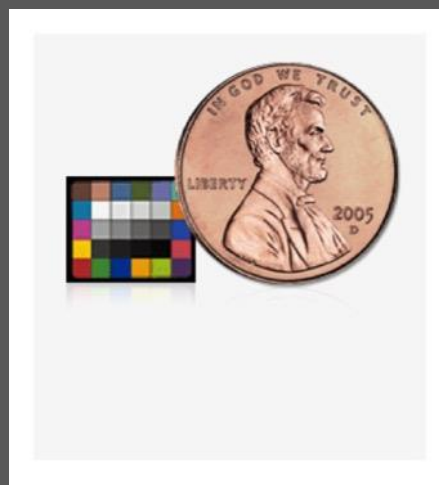


Correct Settings

Standardize all settings.



Kodak Gray Scale and Color Control Patches



ColorGauge Pico Target

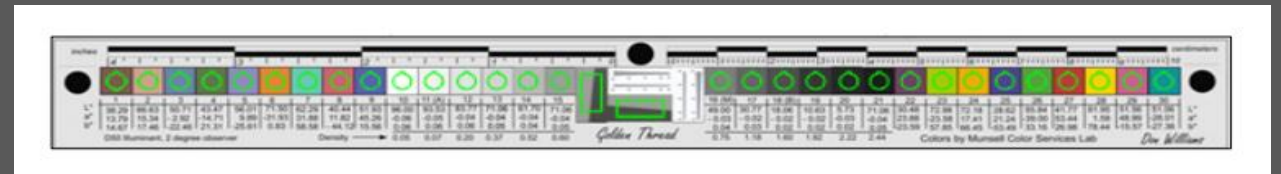


X-Rite Color Checker – Color Rendition Chart

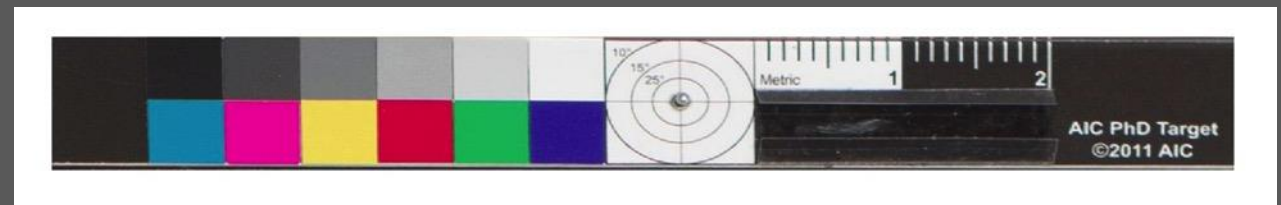
Targets.



X-Rite Color Checker – Passport



Golden Thread Object Level Target



AIC PhD Target

Digitization Standards:

FADGI: http://www.digitizationguidelines.gov/guidelines/FADGI_Still_Image_Tech_Guidelines_2015-09-02_v4.pdf

NARA: <https://www.archives.gov/preservation/technical/guidelines-1998.pdf>

ALA: <http://www.ala.org/alcts/resources/preserv/minimum-digitization-capture-recommendations>

IFLA: <http://www.ifla.org/files/assets/rare-books-and-manuscripts/rbms-guidelines/guidelines-for-planning-digitization.pdf>

DLF: <https://old.diglib.org/pubs/dlf091/dlf091.htm#visguide2>

SAA: <http://www2.archivists.org/standards/external/123#.VOJEXpMrKEI>

LOC: <https://memory.loc.gov/ammem/about/techIn.html>

Scanners:

Flatbed Reflective Scanners

Epson 11000XL: http://www.bhphotovideo.com/c/product/917714-REG/epson_e11000xl_ga_expression_11000xl_graphic_arts.html

Plustek A300: <http://www.bhphotovideo.com/bnh/controller/home?O=&sku=600845&gclid=CLD3yrnr7swCFQgoaQod8ggN1A&is=REG&ap=y&m=Y&c3api=1876%2C92051678642%2C&Q=&A=details>

Flatbed Film Scanners

Epson V850: http://www.bhphotovideo.com/c/product/1083201-REG/epson_b11b224201_perfection_v850_pro_scanner.html

Hasselblad Flextight X1: http://www.bhphotovideo.com/c/product/463799-REG/Hasselblad_70380201_Flextight_X1_Scanner.html

Planetary and Reprographic Systems

Digibook: <http://www.i2s-digibook.com/>

Digital Transitions: <https://digitaltransitions.com/>

Zeutschel: <https://www.zeutschel.de/en/>

Duplex Scanners

Fujitsu FI-6670: <http://www.fujitsu.com/us/products/computing/peripheral/scanners/fi/production/fi6670/index.html>

Fujitsu FI-6110: <http://www.fujitsu.com/us/products/computing/peripheral/scanners/fi/workgroup/fi6110/index.html>

Monitor Calibration:

Basic Systems

X-Rite I1 Display Pro : http://www.bhphotovideo.com/c/product/798930-REG/X_Rite_EODIS3_i1Display_Pro.html

X-Rite ColorMunki Display: http://www.bhphotovideo.com/c/product/798928-REG/X_Rite_CMUNDIS_ColorMunki_Display.html

Spyder5 Pro: http://www.bhphotovideo.com/c/product/1130968-REG/datacolor_s5p100_spyder5pro_downloadable_software.html

Advanced Systems

X-Rite I1 Display Pro Bundle : http://www.bhphotovideo.com/c/product/859820-REG/X_Rite_EODIS3CCPP_i1Display_Pro_and_ColorChecker.html

X-Rite ColorMunki Display Bundle: http://www.bhphotovideo.com/c/product/859826-REG/X_Rite_CMUNDISCCPP_ColorMunki_Display_and_ColorChecker.html

Spyder5 Pro Bundle: http://www.bhphotovideo.com/c/product/1184026-REG/datacolor_s5sr100_spyderstudio_color_calibration_bundle.html

Scanner Calibration:

X-Rite: https://www.xrite.com/documents/literature/en/l11-176_guide_to_cm_en.pdf

Silverfast: <http://www.silverfast.com/highlights/autoit8/en.html>

RP Imaging: <http://www.rpimaging.com/calibrate-scanner.html>

Vue Scan: <https://www.hamrick.com/>

Purdue: https://engineering.purdue.edu/EISL/color_devices/scanner_calibration.pdf

Lens Craft: <https://lenscraft.co.uk/vuescan-scanner-calibration-how-to/>

ScanDig: <http://www.filmscanner.info/en/Scannerkalibrierung.html>

About.com: http://desktoppub.about.com/cs/colorcalibration/a/cal_scanner.htm

Color Charts and Targets:

AIC PHD Targets: <http://www.conservation-us.org/publications/our-publications/special-projects/photodocumentation-targets#.VOISIJMrKEI>

Image Science and Associates: <http://www.imagescienceassociates.com/>

X-Rite Color Checker Classic Card: http://www.bhphotovideo.com/c/product/465286-REG/X_Rite_MSCCC_Original_ColorChecker_Card.html

X-Rite Color Checker Passport Photo: http://www.bhphotovideo.com/c/product/651253-REG/X_Rite_MSCCPP_ColorChecker_Passport.html

Kodak Color Separation Guide and Gray Scale: http://www.bhphotovideo.com/c/product/26662-REG/Kodak_1527654_Color_Separation_Guide_and.html

Lasersoft/Silverfast IT8 Target: http://www.bhphotovideo.com/c/product/436234-REG/LaserSoft_Imaging_LA1116_Reflective_IT8_16x21cm_Calibration.html

Imaging Software:

Adobe Photoshop CC: <http://www.adobe.com/products/photoshop.html>

Adobe Acrobat: <https://acrobat.adobe.com/us/en/acrobat/acrobat-pro.html>

Image Magick: <http://www.imagemagick.org/script/index.php>

GIMP: <https://www.gimp.org/>

ACDSEE: <http://www.acdsee.com/>

Scan Tailor: <http://scantailor.org/>

Bulk Rename Utility: http://www.bulkrenameutility.co.uk/Main_Intro.php

Metamorphose: <http://file-folder-ren.sourceforge.net/>

Carbon Copy Cloner: <https://bombich.com/>

Thank You