

THE COTTAGE WORKSHOPS

DIGITAL PRINTMAKING

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IN THIS WORKSHOP

DEMONSTRATE a proven step-by-step workflow for digital printing, including:

WORKING FROM THE MASTER FILE
CREATING A COMPOSITE LAYER IN THE MASTER FILE
THE TEMPLATE CONCEPT
CREATING PRINTING TEMPLATES IN PHOTOSHOP
INSTALLING PRINTERS AND PROFILES
USING YOUR PRINTING TEMPLATES
SOFT PROOFING ON-SCREEN
PROOF PRINTING AND FINE-TUNING
MAKING THE FINE PRINT
HANDLING WORKS ON PAPER

to help you develop your own DIGITAL WORKFLOW.

MONITOR CALIBRATION

DATA-COLOR SPYDER 3 ELITE or X-RITE COLOR MUNKI

CALIBRATION PROCESS:

INSTALL software

CONFIGURE room (subdued lighting)

ATTACH measuring device

SET BRIGHTNESS LEVEL of monitor to LOW

SET BASIC CALIBRATION INFO

Monitor type (LCD)

Whitepoint - D65

Brightness - **120** ~ 150

RUN calibration program **TWO TIMES**

NAME monitor profile by screen & date

MONITOR CALIBRATION

CREATING A MONITOR PROFILE

THE FIRST STEP IN COLOR MANAGEMENT

Your monitor must be calibrated to reproduce a file's color information accurately.

Adjusting images using a monitor that is not calibrated means you can't see what you're doing.

Calibration systems send known color values from software to the screen, which are read by a spectrophotometer attached to the screen.

The values that the monitor displays are compared to the known values generated by the software, and a profile is created to display the colors correctly.



THE MASTER FILE

ONE LAYERED PHOTOSHOP FILE FOR EACH IMAGE

Use a consistent workflow to build your image

Build a workflow ACTION and use it!

Work in a specified order for proper results

A repeatable process increases productivity

Build “STANDARD” color image first

Apply creative treatments next using LAYER GROUPS

SAVE MASTER FILE in “FINAL FILES” folder

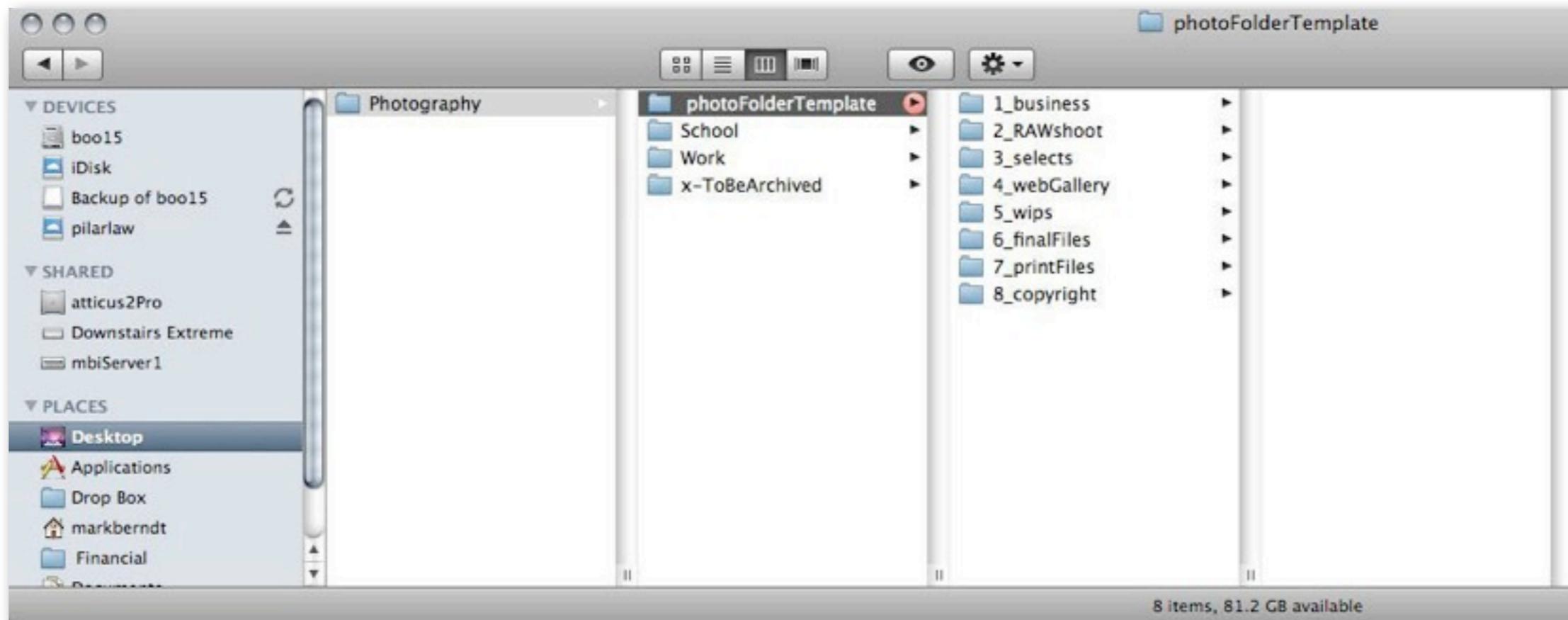
OPEN MASTER FILE to create customized “OUTPUT FILES”

THE MASTER FILE

ONE LAYERED PHOTOSHOP FILE FOR EACH IMAGE

MASTER FILES are kept in the FINAL FILES folder and are used to create OUTPUT FILES

Customized PRINT TEMPLATE FILES are saved to the PRINT FILES FOLDER



THE COMPOSITE LAYER

A SINGLE-LAYER VERSION OF YOUR MASTER FILE

OPEN the MASTER FILE

ACTIVATE the topmost *visible* LAYER or LAYER GROUP

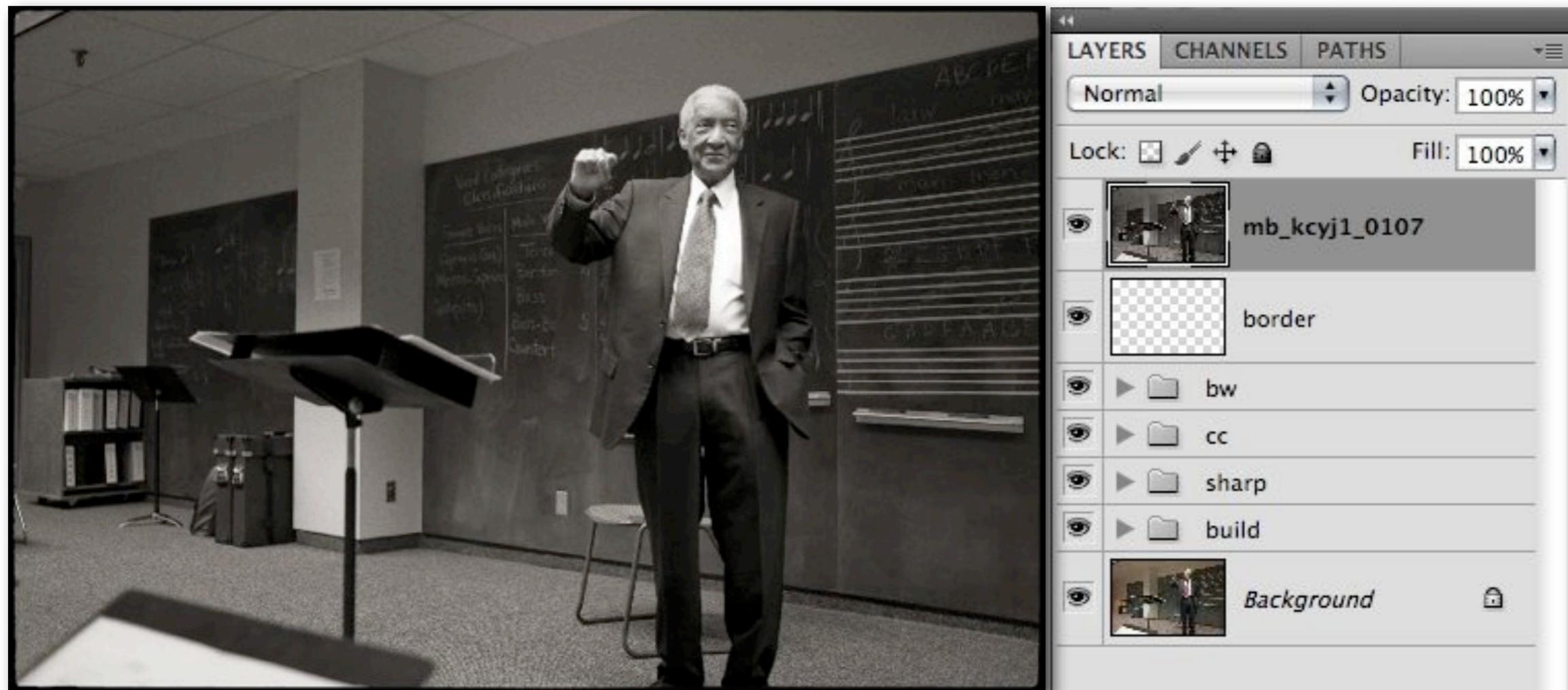
PRESS **SHIFT + OPTION + COMMAND + E** to create a
COMPOSITE LAYER as the TOP LAYER of your MASTER FILE

LABEL the COMPOSITE LAYER the same as your MASTER FILE

SAVE the MASTER FILE

THE COMPOSITE LAYER

A SINGLE-LAYER VERSION OF YOUR MASTER FILE



CROP WITH COMPOSITE LAYER WHILE RETAINING ORIGINAL FILE DIMENSIONS

SELECT the COMPOSITE LAYER in your MASTER FILE

PRESS **F** to change screen modes

PRESS **COMMAND + T** to activate FREE TRANSFORM

PRESS **COMMAND + ZERO** to see bounding box

PRESS **COMMAND + -** (minus sign) to reduce image size

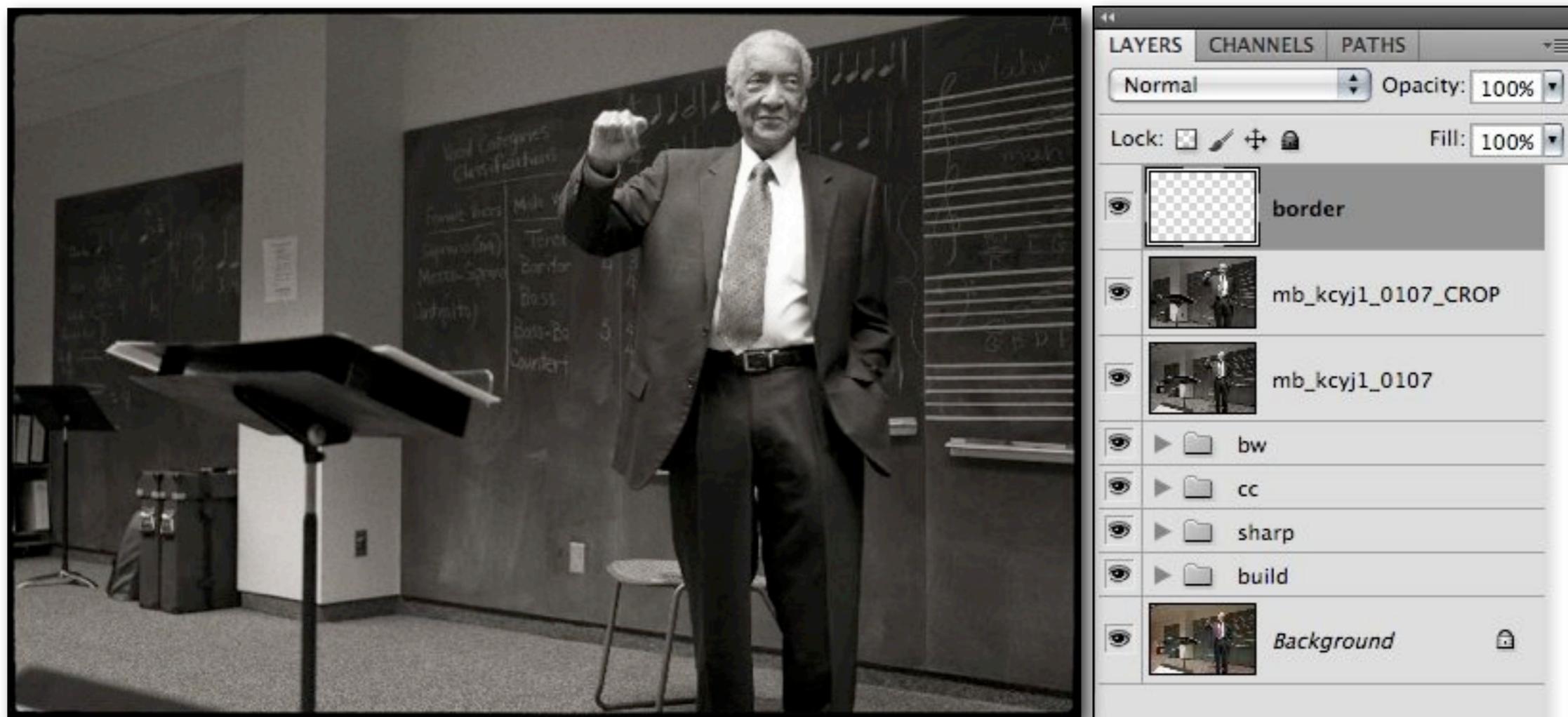
RE-SIZE & MOVE the layer to perfect your new crop

PRESS **COMMAND + A** to select the file dimensions

GO TO **IMAGE>CROP** to remove excess image from crop layer

SAVE the MASTER FILE

CROP WITH COMPOSITE LAYER WHILE RETAINING ORIGINAL FILE DIMENSIONS



THE PRINTING TEMPLATE

CONSISTENT & REPEATABLE PRINTING

Printing TEMPLATES allow pixel-accurate control of the size, crop and image placement of your image in any medium (print, web, projection)

Printing efficiency is increased and printing stress is reduced

Create professional presentations and exhibitions by easily outputting consistent files

Eliminate arbitrary lab decision and costs by supplying PRINT-ON-DEMAND ready files

A system for repeatable output for future printing sessions

CREATING THE PRINTING TEMPLATE

A CUSTOM PHOTOSHOP FILE FOR *EACH* OUTPUT

Go to **FILE > NEW**

Set FILE DIMENSIONS + RESOLUTION + COLOR SPACE + WHITE BACKGROUND

Create a NEW LAYER and label it "CROP MARKS"

COMMAND + A to select all

EDIT > STROKE > *INSIDE* > 1 pixel > BLACK

COMMAND + D to de-select

Press **F** to change SCREEN MODE

Use 0-feather MARQUEE TOOL to trim STROKE LAYER

Set OPACITY to 25%

Drag from rulers to set GUIDES

Select BACKGROUND LAYER

SAVE FILE with appropriate name into your PRINTING TEMPLATES folder

USING THE PRINTING TEMPLATE

#1 - TO CREATE AN INDIVIDUAL PRINT FILE

Turn off **OPEN DOCUMENTS AS TABS** in your Photoshop
PREFERENCES > INTERFACE > PANELS & DOCUMENTS

OPEN the appropriate size PRINT TEMPLATE file

OPEN a MASTER FILE

SHIFT DRAG the COMPOSITE LAYER of your MASTER FILE into the
TEMPLATE FILE

Press **F** TO change SCREEN MODES

COMMAND + - (minus) to reduce IMAGE SIZE

COMMAND + T to activate FREE TRANSFORM

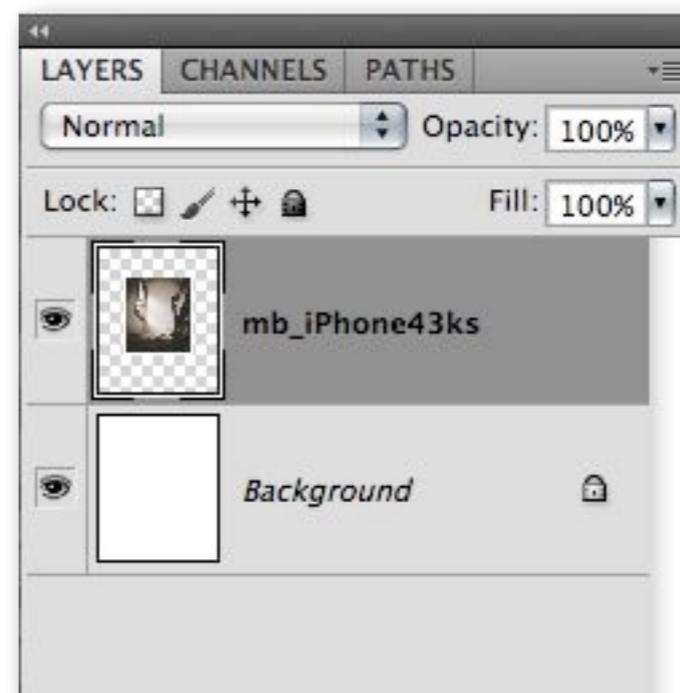
Set HORIZONTAL DIMENSION + UNITS in **OPTIONS BAR**

PRESS ENTER TWICE to commit TRANSFORM

Use **MOVE TOOL + SHIFT** to reposition if necessary

USING THE PRINTING TEMPLATE

#1 - TO CREATE AN INDIVIDUAL PRINT FILE



USING THE PRINTING TEMPLATE

#2 - TO CREATE A *STACKED* PRINT FILE

Turn OFF OPEN DOCUMENTS AS TABS in your Photoshop
PREFERENCES > INTERFACE > PANELS & DOCUMENTS

OPEN the appropriate size PRINT TEMPLATE file

In **BRIDGE** select up to 10 multiple images for batch printing (same size, paper & printer)

Select **TOOLS>PHOTOSHOP>LOAD FILES INTO PHOTOSHOP LAYERS** to create a layered photoshop SOURCE file (this works best if all files are the same size)

Select ALL LAYERS - CLICK top layer then **SHIFT CLICK** bottom layer (not Background)

SHIFT DRAG the stacked LAYERS of your SOURCE FILE into the TEMPLATE FILE

Press **F** to change SCREEN MODES

COMMAND + - (MINUS) to reduce IMAGE SIZE

COMMAND + T to activate FREE TRANSFORM

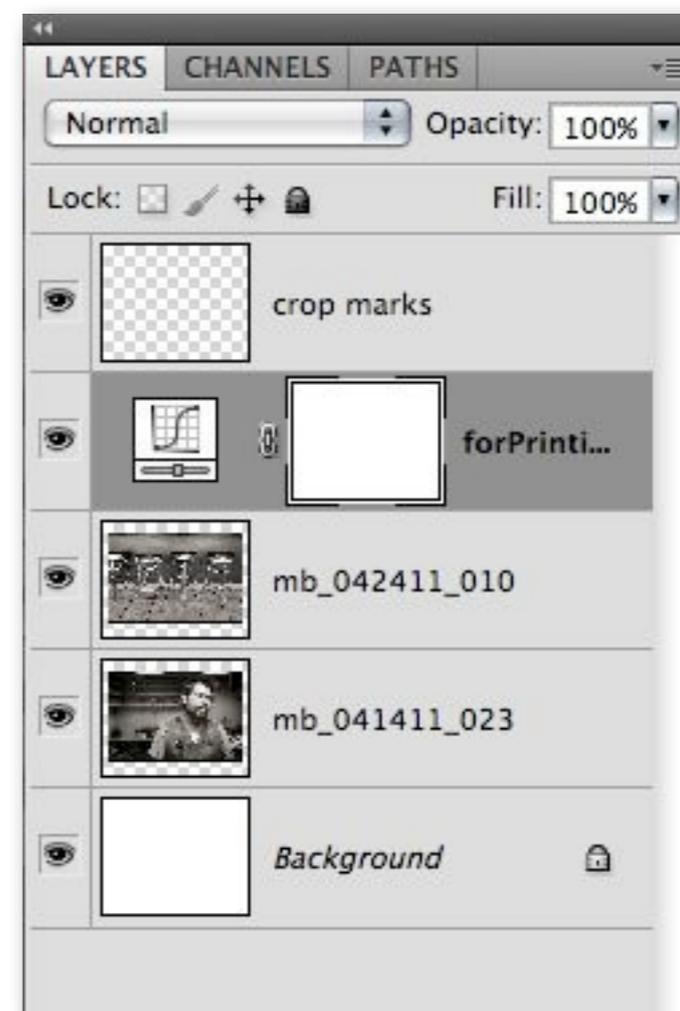
Set HORIZONTAL DIMENSION + UNITS in **OPTIONS BAR**

Press ENTER **TWICE** to commit TRANSFORM

Use **MOVE TOOL + SHIFT** to reposition if necessary

USING THE PRINTING TEMPLATE

#2 - TO CREATE A *STACKED* PRINT FILE



PROOFING

PRINTING'S ESSENTIAL FIRST STEP

When we print we try to control the TRANSLATION of the image from screen to paper by maximizing the ability of the printer/paper/ink to reproduce color and contrast in a color space smaller than that of both the file and the display.

No matter how well-calibrated the monitor, images change when reproduced on paper and again when viewed under various light sources*.

Every printing device creates color differently.

FINE ADJUSTMENTS to the printing file based on evaluation of the proof allows us to compensate for printer limitations.

Proofing on smaller paper, and gang-proofing groups of images, SAVES TIME, PAPER and INK and helps ensure satisfactory results in the final print.

* Controlling the print viewing light source is as important as calibrating your monitor. The SoLux Color Proofing Light Kit is a reasonably-priced color-balanced print viewing solution from www.solux.net.

CREATING A PROOF DOCUMENT FOR SINGLE IMAGES AND GANG-PROOFING

OPEN an appropriate size PRINT TEMPLATE FILE

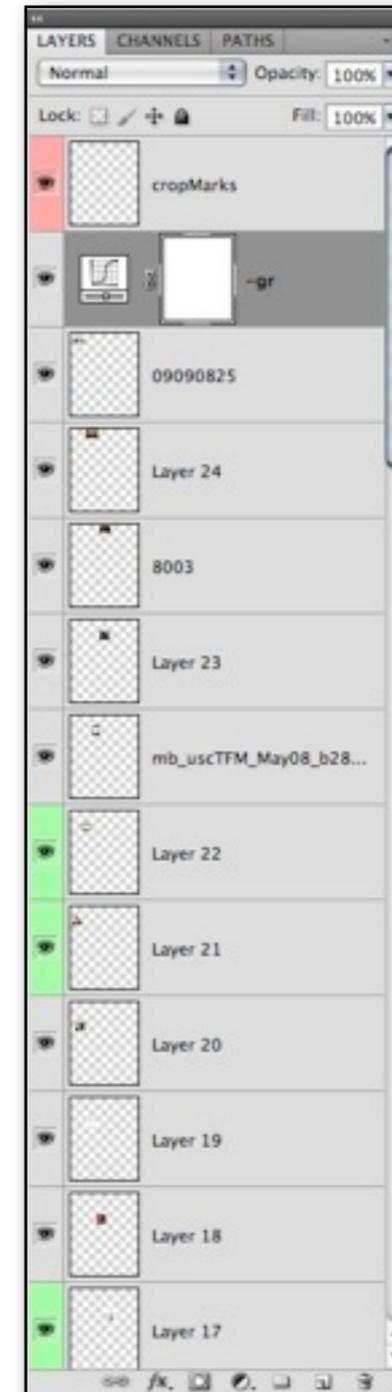
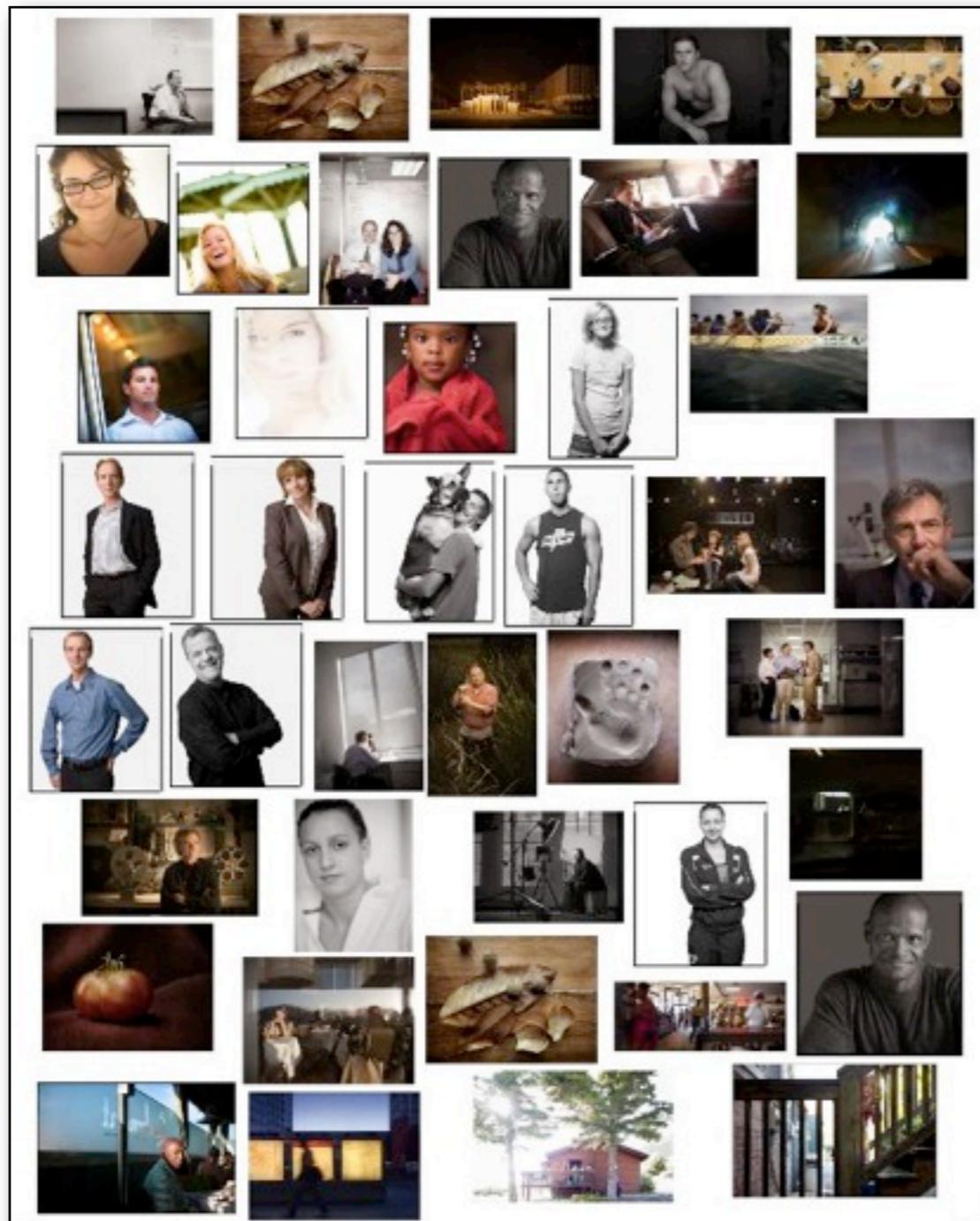
In BRIDGE use **TOOLS > PHOTOSHOP > OPEN FILES INTO PHOTOSHOP LAYERS** to create a single, layered SOURCE FILE of the images you intend to print

SELECT ALL LAYERS and **SHIFT DRAG** into the PRINT TEMPLATE FILE, then RE-SIZE the images so that they can all fit onto the page

Using the MOVE TOOL, arrange the images on the page

SAVE AS - with appropriate name + "PROOF" - to your PRINT FILES folder

CREATING A PROOF DOCUMENT FOR SINGLE IMAGES AND GANG-PROOFING



SOFT-PROOFING ONSCREEN

PHOTOSHOP'S PRE-PRINT EVALUATION TOOL

In PHOTOSHOP, choose **VIEW > PROOF SETUP > CUSTOM**

SELECT the printer/paper PROFILE you intend to print with

SAVE the PROOF SETUP and make sure it's selected

SELECT **VIEW > PROOF COLORS** to activate soft-proofing

You may notice shift in the image when you turn on soft-proofing

NOTE: This is an approximation of the way the image will appear when printed using the selected paper, printer and profile. It may or may not accurately render a view of the eventual print.

SOFT-PROOFING ONSCREEN

PHOTOSHOP'S PRE-PRINT EVALUATION TOOL

The image displays the Photoshop interface for soft-proofing. On the left, the 'Proof Setup' menu is open, showing options for 'Proof Colors', 'Gamut Warning', 'Pixel Aspect Ratio', 'Zoom In', 'Zoom Out', 'Fit on Screen', 'Actual Pixels', 'Print Size', 'Screen Mode', 'Extras', 'Rulers', 'Snap', 'Lock Guides', and 'Lock Slices'. The 'Custom...' option is selected, leading to a secondary menu with options like 'Working CMYK', 'Working Cyan Plate', 'Working Magenta Plate', 'Working Yellow Plate', 'Working Black Plate', 'Working CMY Plates', 'Legacy Macintosh RGB (Gamma 1.8)', 'Internet Standard RGB (sRGB)', 'Monitor RGB', 'Color Blindness - Protanopia-type', and 'Color Blindness - Deuteranopia-type'. The 'Epson9600_GerEtch' option is highlighted.

The 'Customize Proof Condition' dialog box is open, showing the following settings:

- Custom Proof Condition: Epson9600_GerEtch
- Device to Simulate: MB's9600mk-EpnUSFA_1998P_082208
- Preserve RGB Numbers
- Rendering Intent: Perceptual
- Black Point Compensation
- Display Options (On-Screen):
 - Simulate Paper Color
 - Simulate Black Ink

Buttons for OK, Cancel, Load..., Save..., and Preview are visible on the right side of the dialog.

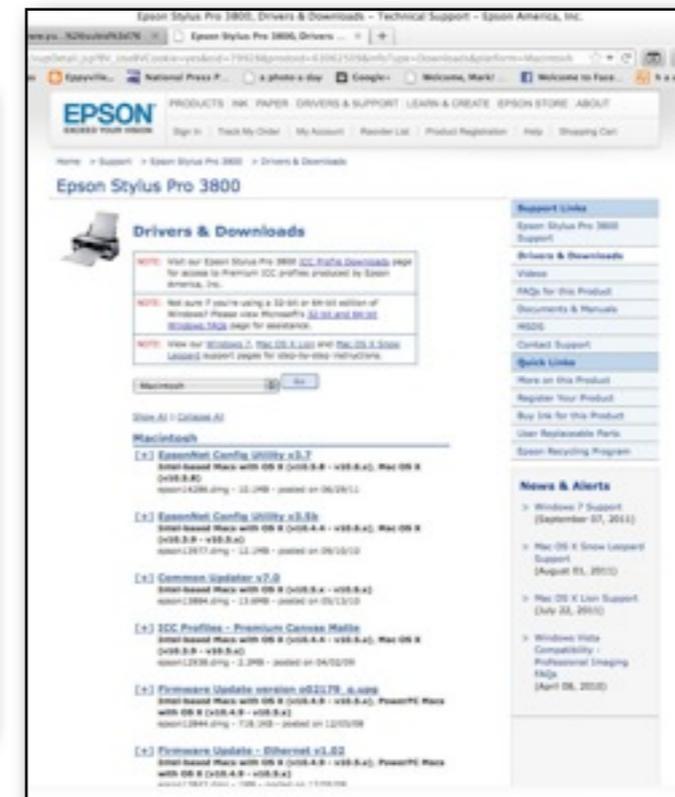
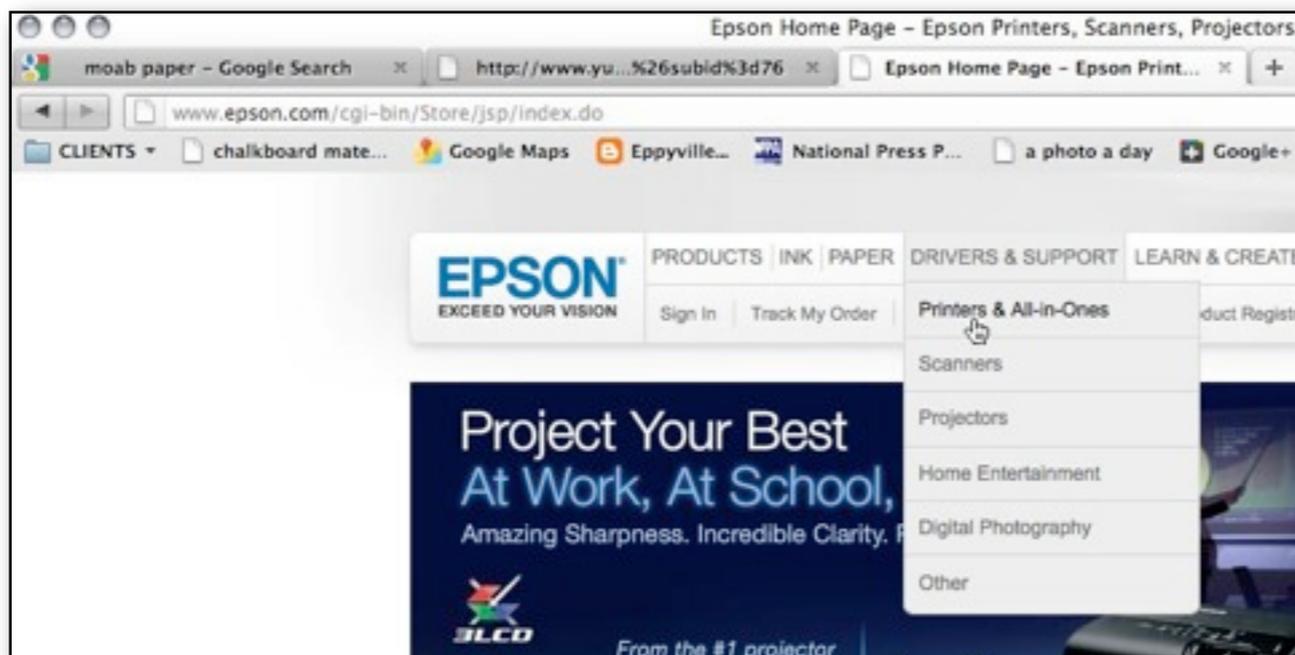
INSTALLING YOUR PRINTER DOWNLOAD & INSTALL PRINTER DRIVERS

Go to your printer manufacturer's website (example: www.epson.com)

Go to the SUPPORT or DOWNLOADS section, or to your printer's info page - or search to locate the current software available for your printer. DOWNLOAD and INSTALL the software on your computer.

NOTE: Usually the software on the CD that ships with your printer needs to be updated before use. It's usually best to leave the CD untouched and download the latest software.

In MAC OS, after installing the printer software, go to **SYSTEM PREFERENCES > PRINT & FAX** to add a printer. The printer must be connected to the computer via printer



INSTALLING PRINTER PROFILES

DOWNLOAD & INSTALL ICC PROFILES FOR YOUR PRINTER & PAPER

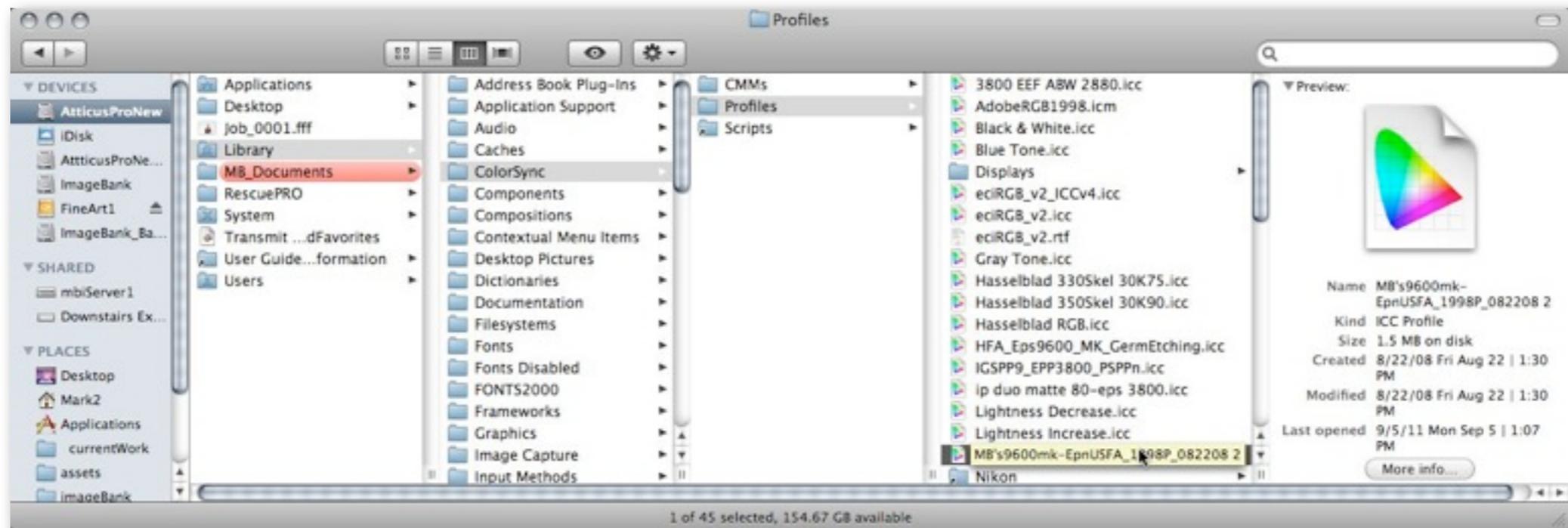
Go to your paper manufacturer's website (ex: www.epson.com or www.moabpaper.com)

Go to the SUPPORT or DOWNLOADS section, or your paper's info page, or otherwise locate the ICC PROFILE for your specific printer/paper/ink combination. Download the profile to your desktop.

In MAC OS, drag the profile to your **MAIN HARD DRIVE > LIBRARY > COLOR SYNC > PROFILES** and drop it into the folder.

Do this for every paper you wish to use, and make note of the ICC Profile NAMES as they can be difficult to decipher when choosing from a long list of profiles.

RESTART PHOTOSHOP to that it can rebuild its profile list.



PRINT SETTINGS IN PHOTOSHOP

USE PHOTOSHOP TO PROOF AND PRINT YOUR IMAGE FILES

LOAD a sheet of paper into the printer

OPEN your PROOFING FILE in PHOTOSHOP

IN PHOTOSHOP CS5:

SELECT **FILE > PRINT** to open the PRINT DIALOGUE BOX

IN THE CENTER COLUMN:

SELECT YOUR PRINTER in the top-most drop-down menu

Leave **COPIES** set to "1"

Next to **PRINT SETTINGS** select the PAPER ORIENTATION

Click to **OPEN PRINT SETTINGS**

SELECT your PAPER SIZE from the drop-down menu

In the **LAYOUT** drop-down menu SELECT **PRINT SETTINGS**, and **SET OPTIONS** based on your specific paper. Set **COLOR SETTINGS** to **OFF**

Switch to **PAPER CONFIGURATION** in the drop-down and set **COLOR DENSITY** to **-10%**

Click **SAVE** to return to the PHOTOSHOP dialogue

IN THE RIGHT COLUMN:

SET **COLOR MANAGEMENT** to **DOCUMENT**

SET **PHOTOSHOP MANAGES COLOR**

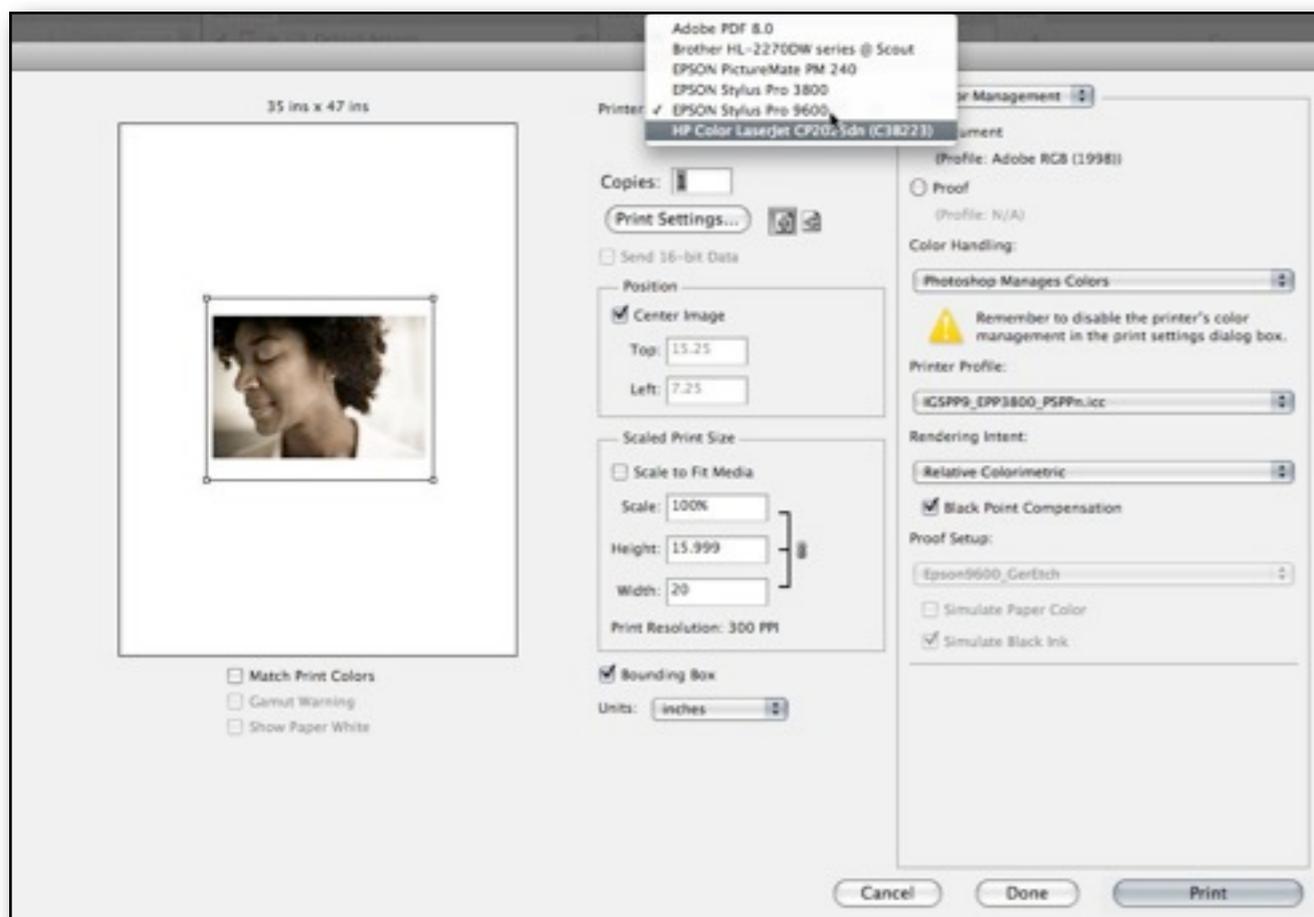
SELECT the proper **ICC PROFILE** from the profile drop-down menu

SET RENDERING INTENT based on PAPER SPECIFICATIONS (usually perceptual)

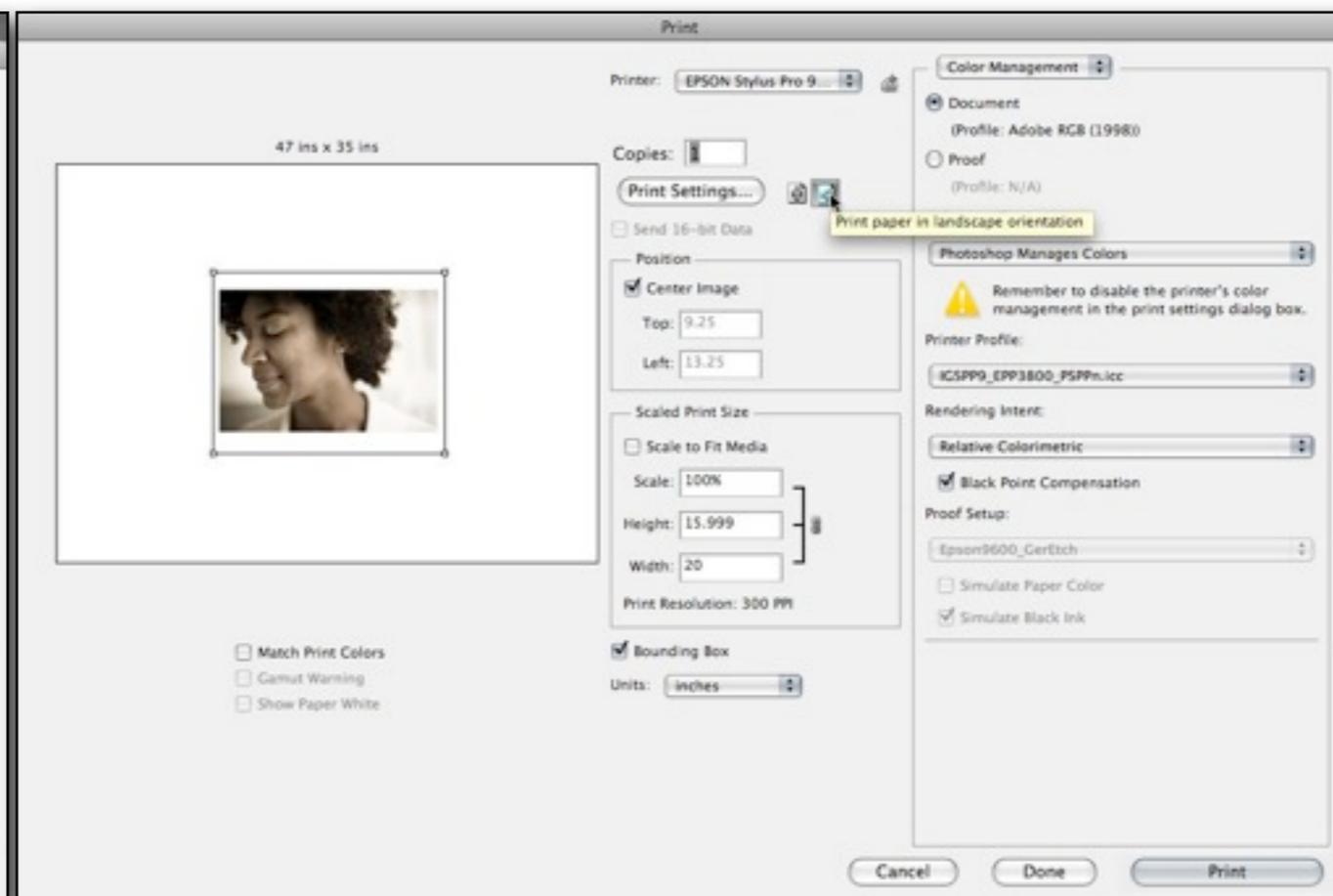
CLICK "PRINT"

PRINT SETTINGS IN PHOTOSHOP

USE PHOTOSHOP TO PROOF AND PRINT YOUR IMAGE FILES



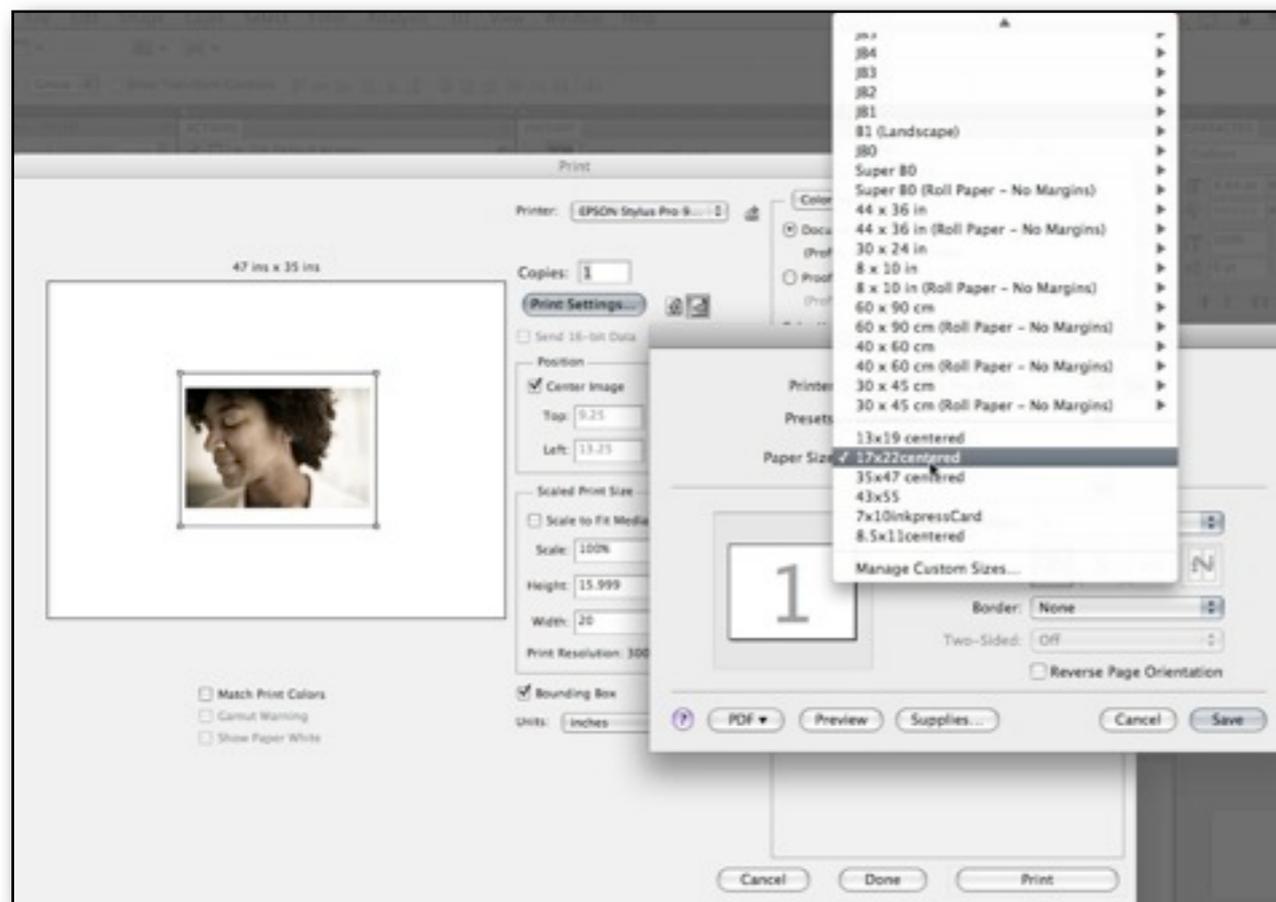
SELECT PRINTER



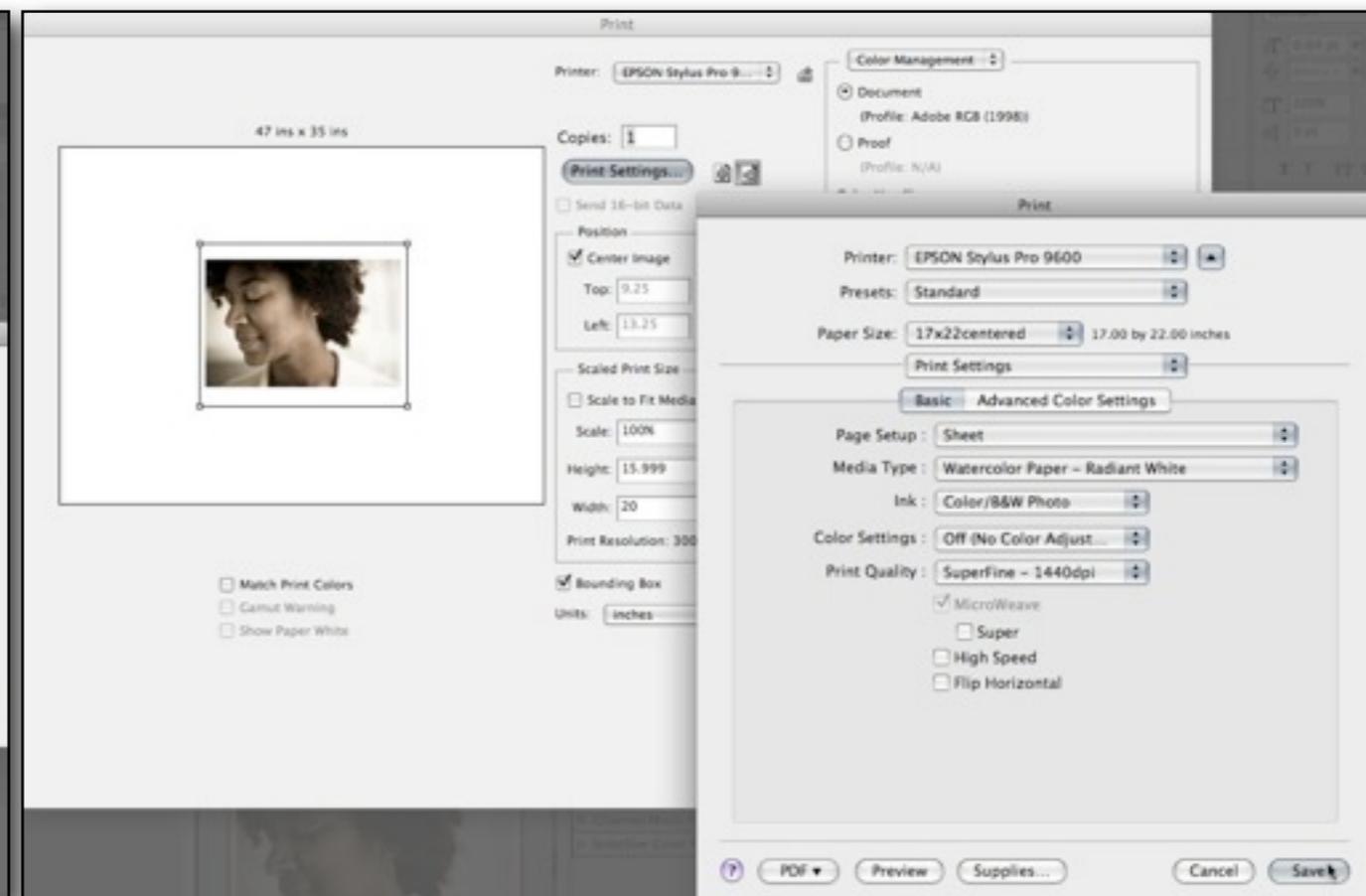
SELECT ORIENTATION

PRINT SETTINGS IN PHOTOSHOP

USE PHOTOSHOP TO PROOF AND PRINT YOUR IMAGE FILES



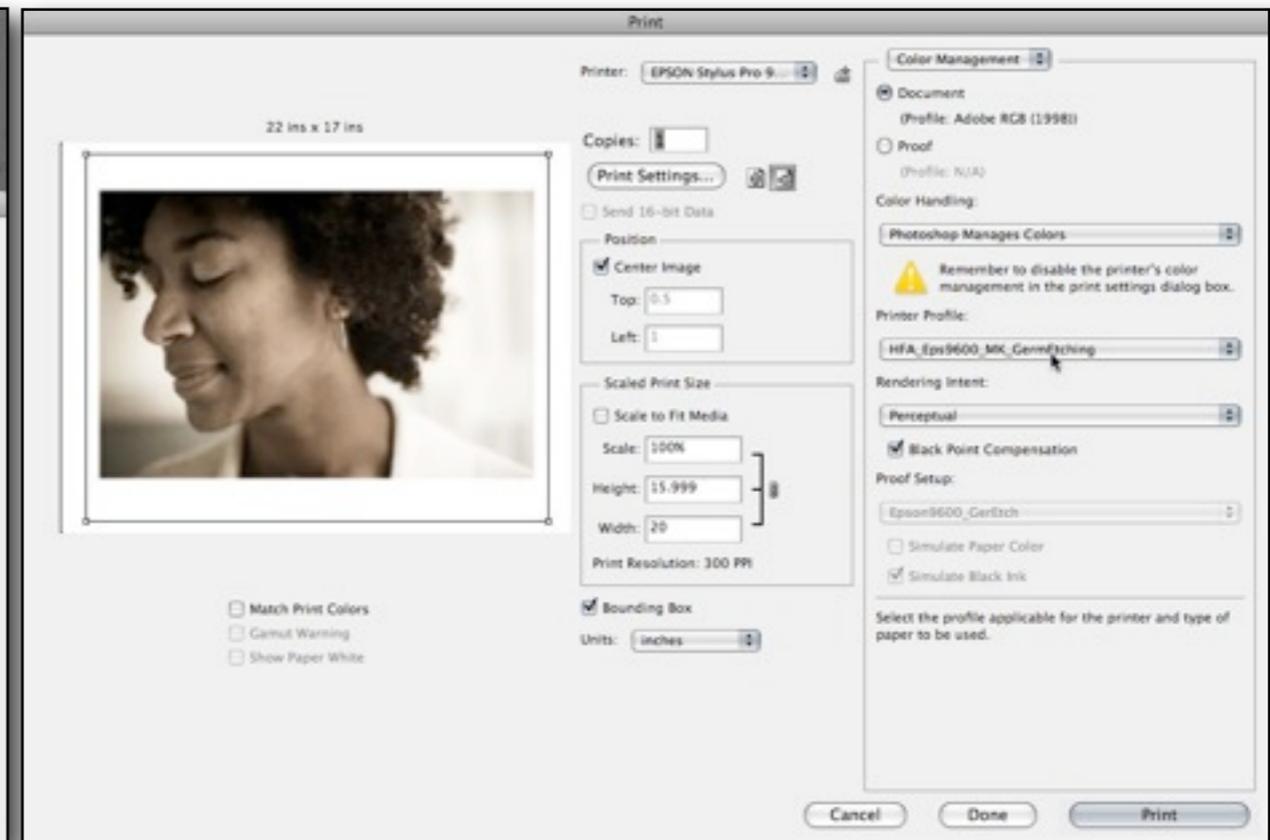
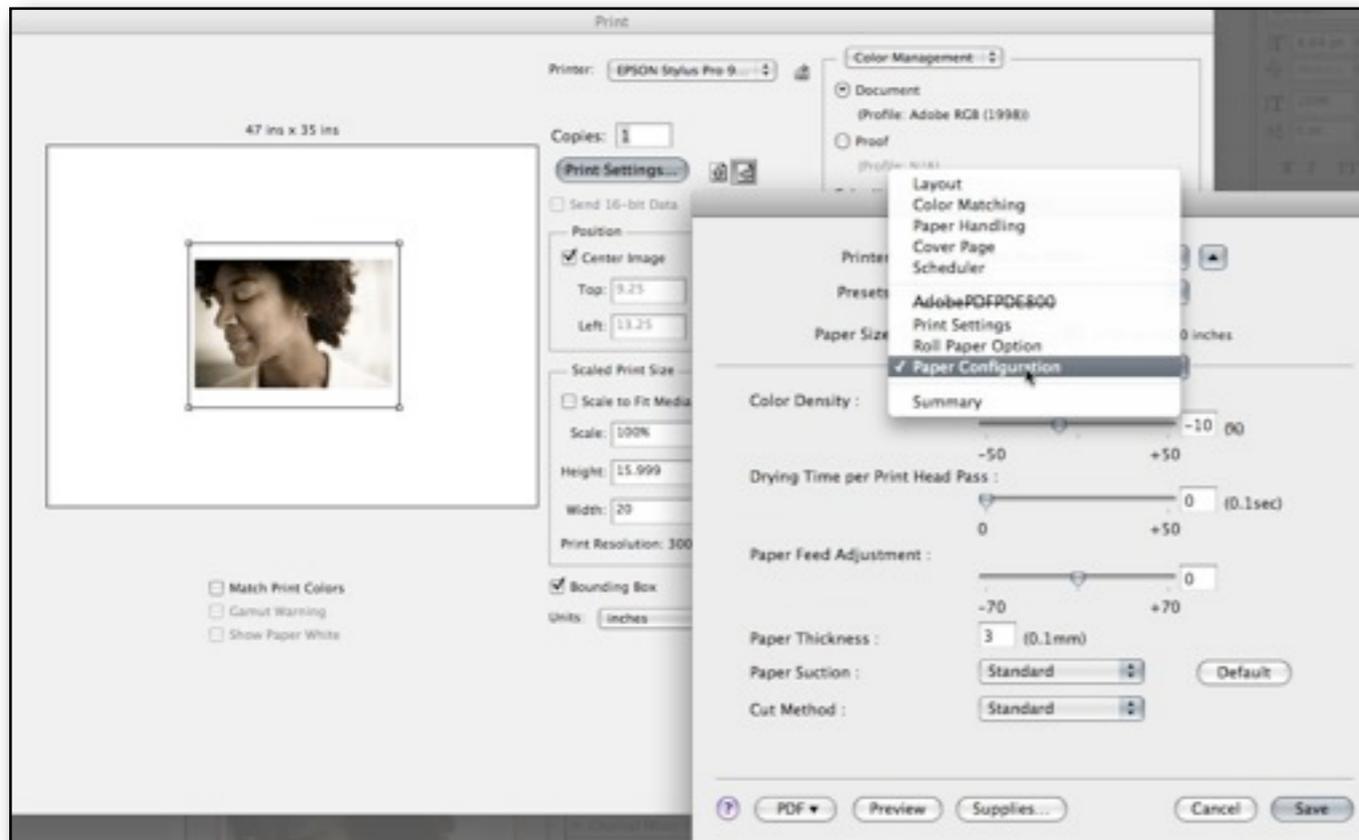
SELECT PAPER SIZE
*NOTE: CREATE CUSTOM PAPER SIZES
TO ENSURE CENTERED PRINTING*



SET PRINT SETTINGS
BASED ON PAPER SPECIFICATIONS
CHOOSE COLOR SETTINGS: "OFF"

PRINT SETTINGS IN PHOTOSHOP

USE PHOTOSHOP TO PROOF AND PRINT YOUR IMAGE FILES



ADJUST COLOR DENSITY IN PAPER CONFIGURATION
TO REDUCE INKFLOW
(I FIND THIS PREVENTS BLOCKED SHADOWS
WITHOUT NOTICEABLE CONTRAST LOSS)

CHOOSE "Photoshop Manages Color" + proper profile

PRINT SETTINGS IN PHOTOSHOP

USE PHOTOSHOP TO SOFT-PROOF AND PRINT YOUR IMAGE FILES

With older versions of Photoshop some settings must be made after setting the PHOTOSHOP PRINT DIALOGUE in an additional Epson PRINT DIALOGUE BOX that appears after you click **PRINT** in Photoshop.

In the Epson PRINT DIALOGUE BOX:

SELECT PAPER SIZE

In the LAYOUT drop-down menu SELECT **PRINT SETTINGS**, and **SET OPTIONS** based on your specific paper. SET **COLOR SETTINGS** to **OFF**

SWITCH TO

Switch to **COLOR MANAGEMENT** in the drop-down menu and set to **OFF**

Switch to **PAPER CONFIGURATION** in the drop-down menu and set

COLOR DENSITY to **-10%**

Click **PRINT**

PROOF PRINTING & FINE TUNING

PRINT REDUCED-SIZE PROOFS AND ADJUST BEFORE MAKING LARGE FINAL PRINTS

LABEL AND EVALUATE your first proof print. Note details about your settings + “no corrections”.

Your proof should look very close to the images you see on-screen. If not, re-check all settings. If you are gang-proofing, usually *all* images will exhibit similar discrepancies with the screen image if the proof group was prepared consistently, meaning that a single adjustment to the file will make the images more acceptable.

In PHOTOSHOP, **ADD A CURVE LAYER** to the top of your layer stack to make GLOBAL ADJUSTMENTS to the images based on what discrepancies you see in the proof.

NOTE: Your adjustments create changes that are THE OPPOSITE of what you feel is wrong with the file - ie. if the proof is too dark, and the proof looks right on screen, you will make an adjustment that renders the view on-screen looking too light. You will adjust the file so that it doesn't look exactly right on-screen, but prints properly.

PROOF AGAIN (#2) and evaluate the effects of your adjustment layer.

Continue this process until you are happy with the printed proof.

NOW. **OPEN** your INDIVIDUAL or STACKED PRINTING TEMPLATE DOCUMENT

SHIFT-DRAG the GLOBAL CURVE ADJUSTMENT LAYER from the top of the proof file's layers palette to the TOP of your PRINTING TEMPLATE file to apply the adjustment to all layers in the file.

ACTIVATE one layer at a time and PRINT. Set your print dialogue settings exactly as you did while proofing.

HANDLING WORKS ON PAPER

EXTEND LONGEVITY AND REDUCE WASTE

Wear COTTON GLOVES to prevent oil contamination

Store papers in MODERATE TEMPERATURE and HUMIDITY

HANDLE PAPER by HOLDING CORNER to prevent kinks and creases

Select and stack paper sheets gently to prevent surface scuffing.

DRY PRINTS for 24 HOURS to allow ink out-gassing and extend longevity

TRIM PAPER to actual print size using crop marks.

Use a high-end rotary paper cutter for straight edges

Hand tear prints for deckled edges

SIGN, NUMBER, TITLE and “CHOP” prints for identification and authenticity

STORE in PLASTIC SLEEVES with INTERLEAVING TISSUE in ARCHIVAL STORAGE BOXES

HANDLING WORKS ON PAPER

SCORING, HAND-TEARING, SIGNING, PACKAGING



THE COTTAGE WORKSHOPS

DIGITAL PRINTMAKING

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www.markberndt.com/workshops/downloads/DigPrinting1/

GO MAKE SOME PRINTS!