Making a Scan from a Photographic Print

By Jim Barthman

Here's a step-by-step look at how we produce scans at NYI using a flatbed scanner. Even though your scanner software may be different, the steps shown here will provide a basic guideline for procedures you will need to follow with your own scanner. We'll continue to explore the scanning process later on in your Course, but for now, this procedure will allow you to produce good scans from prints.

Computer: PC
Scanner: Epson
Scanner software: Epson Twain
Original art: 4x6 color print
Intended output: 4x6 inkjet print @300 ppi

1. Make sure your scanner is connected. This one may seem like a no-brainer, but sometimes your computer will not recognize the equipment if you try to plug it in after you start your computer.

2. Turn on your scanner. Locate the power button and press it.

3. Turn on your computer. Locate the power button and press it.

4. Start your scanner software.

Mac
Go to: **Apple Menu>Applications>scanner folder>Scanner application.**

PC
Go to: **Start>Programs>scanner folder>scanner application.**

5. Open the hinged cover. This step, and the next three, are very similar to the operation of a common copy machine.

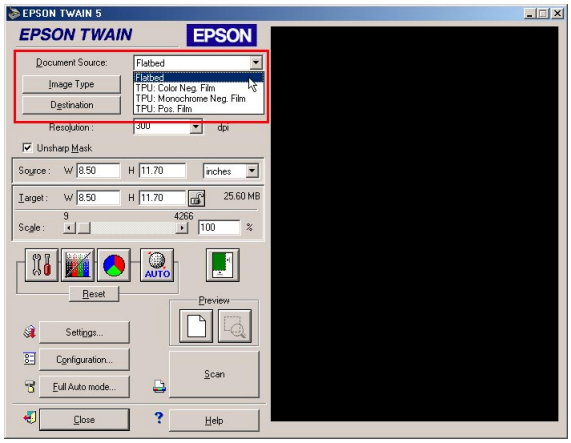
6. Check glass platen and original art for cleanliness. Commonly overlooked, these two steps will save you lots of unnecessary retouching time.

7. Line up the original, face down on the glass. Make sure your art is straight on the glass plate. Most scanners have guides to help with line up of the art. Be consistent with the orientation of your art. That way you can avoid the processing time necessary to rotate a scan later. While rotating an entire image 180 degrees may not compromise quality, smaller transformations may.

8. Close the cover.

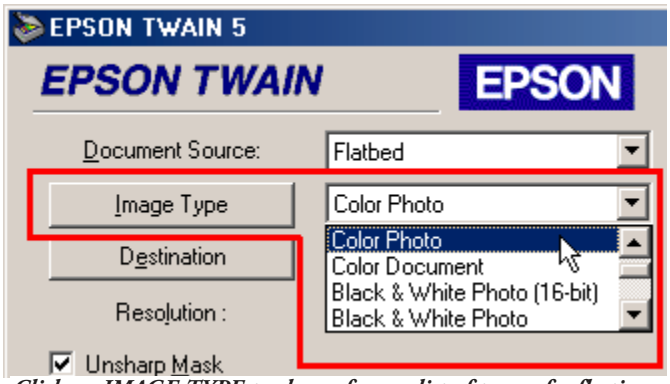
9. With the scanner software active, go to menu command File>Scan. This operation tells the scanning software that you're ready to make a scan.

10. Scanner Interface appears. The scanner interface is simply a dialog box of some sort that allows the user to define how the scan is made. For this exercise, we are using an Epson scanner on a PC. This scanner utilizes Epson Twain software. Your software may look different, but the basic controls should be fairly similar. Before you start scanning you should ask yourself; "What do I want to do with my scan?" The answer to this question will help clarify your scanning choices. Specifically your output resolution choice.



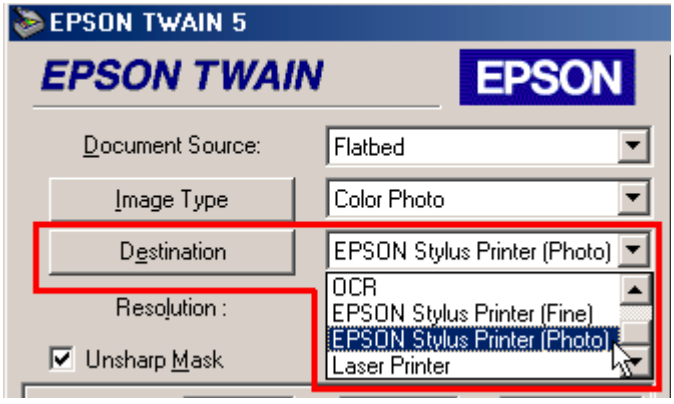
Click on Document Source and choose from Flatbed, or TPU Negative and Positive options.

11. Click on DOCUMENT SOURCE and choose from Flatbed, or TPU Negative and Positive options. If your scanner has the ability to produce scans from reflective art or transparent art you'll have to choose what type of original you're scanning. Because I am scanning a 4 x 6 color print, I choose the Flatbed setting.



Click on IMAGE TYPE to choose from a list of types of reflective media you might be scanning.

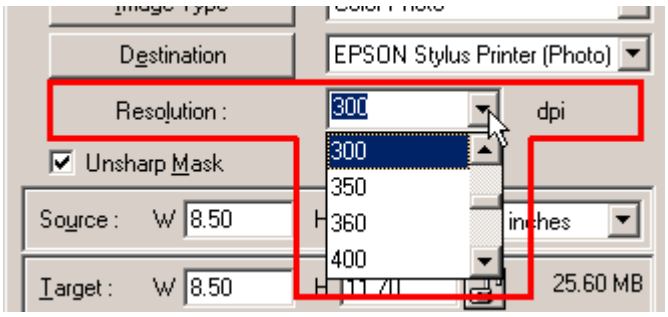
12. Click on IMAGE TYPE to choose from a list of types of reflective media you might be scanning. In this case we are scanning a COLOR PHOTO so that is what I have selected. Your software may or may not have this option, the important thing in is taking the time to give your scanner as much information as possible about the image on the plate and where you want it to go.



Click on DESTINATION to choose from list of output devices.

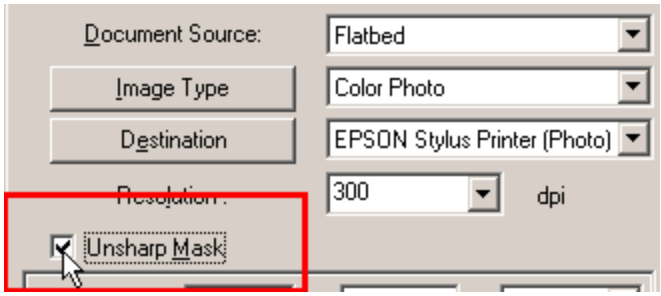
13. Click on DESTINATION to choose from list of output devices. This leads you back to your initial question "What do I want to do with my scan?". I want to print it so I select my destination printer, EPSON STYLUS PRINTER (PHOTO).

14. Click on RESOLUTION to choose from various presets or type in your own. Resolution is the dialog box with which most people have difficulty. Epson's software makes the process pretty simple. I first consider how I want to use my scanned image and at what size. Because I want to print (output) this 4x6 image on an inkjet printer at the same size as the original, 4x6 inches, (100%), all I need to do is select the optimum resolution for that printer, which happens to be 300ppi. If I wanted to print the image at 8x12



Click on RESOLUTION to choose from various presets or type in your own.

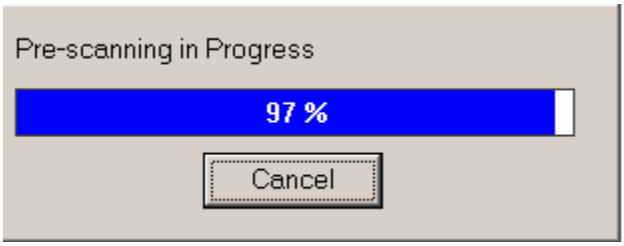
(200%) I would choose 600 ppi. Later I will adjust the 600 ppi resolution to 300 ppi for print output, which in effect the doubles the dimensions. If you're still having trouble with this concept, go to the Study Hall and take a look at the resolution chart. This chart shows how image resolution adjustments affect image size without adding or subtracting a single pixel.



Click on UNSHARP MASK option on select or unselect the option.

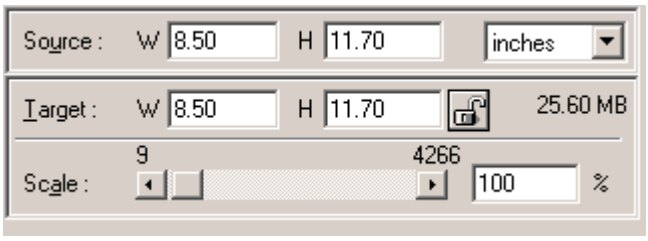
15. Click on UNSHARP MASK option on select or unselect the option. Just like Photoshop, many scanning software programs employ sharpening tools. I typically sharpen my images in Photoshop, mainly because I am comfortable with the predictable results, so I unselected the UNSHARP MASK option. That's not to say that Epson's software does a bad job with sharpening; it simply means that I am more comfortable doing it another way. This particular feature simply runs some default automated sharpening filter over your image at the time of scanning. Test this or your scanner's automated features and decide if the results are to your taste or not.

17. At this point I want to see where the image is going to be placed in the scan area and a preview of what I've done so far. Click the Preview button. This operation initiates the scanner to make the first low-resolution scan of your art. Most scanners automatically assume that you want to preview the entire area, or it may preview based on a previous set up. We will crop this area in a few steps.



A progress bar appears allowing you to monitor how much longer the pre-scan is going to take.

18. Check the preview. Be sure that your original is still straight and that it is not upside down. These steps will eliminate the need to rotate your scans later in Photoshop, and ultimately, increase your productivity.



19. SOURCE and TARGET all refer to dimensions of the Scan Area. Our preview is showing us the entire scanning area of the scanner bed. Our Source and Target values are reading 8.50" x 11.70" respectively. We don't need a high resolution scan of all of this entire area, we want to isolate our image which will optimize the scanning time as well as exposure.

20. This software allows me to choose the area I want with a Rectangular Marquee selection tool. When I move my mouse into the Scan Area the cursor becomes a crosshair(+) that allows me to click and drag a Marquee selection over my image. I can constrain the scan to the "image area only" by re-sizing the bounding box. Do this by clicking and dragging on any of the small boxes or edges on the Marquee using the double-headed black arrows.

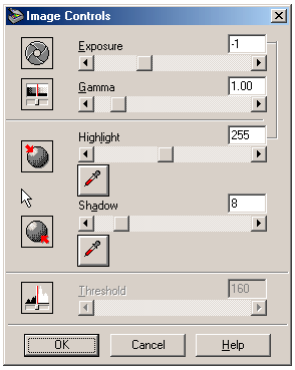
You can monitor the physical dimensions of your selection in the Source value boxes. Notice how the numbers changes as you alter your selection in the scan area. If you find the physical dimensions of the output don't meet your needs you can increase the resolution at this point. I avoid using the SCALE feature and recommend scanning at 100% adjusting resolution and not the scale.

From this point on the scanning options and variables expand even further. I'll introduce several in Epson's software that are fairly common concepts for most scanning software although the terms and exact commands may vary slightly. You'll notice I will not be recommending using many of them, I prefer to do most of these things in Photoshop. Later in the Course we will be taking you specifically through many of these techniques step by step in Lessons when we are all working in the same Photoshop platform.

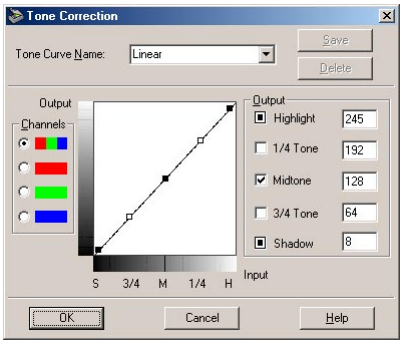
If you're a beginner stick with the Automatic functions to start. As you become more comfortable with the scanning process experiment with these advanced options.

21. Above you see four buttons that allow you to adjust your image further the IMAGE, TONE, COLOR and AUTO buttons.

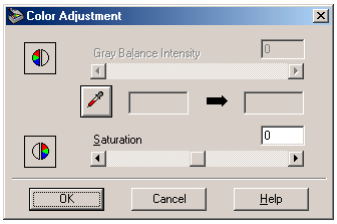
Click on the IMAGE button which opens the Image Control dialog box.



Here you can adjust the Exposure, Gamma, Highlight, Shadows and Threshold by moving the sliders, clicking the arrows or entering values in field boxes. As you make these adjustments the image preview adjusts with it, allowing you to get a sense of your changes. This is an advanced, yet easy-to-use, feature that allows you to isolate and alter different image characteristics. This original is well-exposed so it doesn't warrant these adjustments.



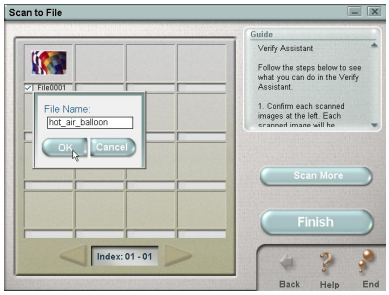
22. Click the TONE button and the Tone Correction dialog box opens. This feature allows you to make advanced tonal corrections via a Curves dialog. Curves take you even deeper, offering you even more control over the tonal range of your image. Later in the Course, we'll be showing you how to use Curves in Photoshop. When you're comfortable there, you can come back and try it here. For now don't bother.



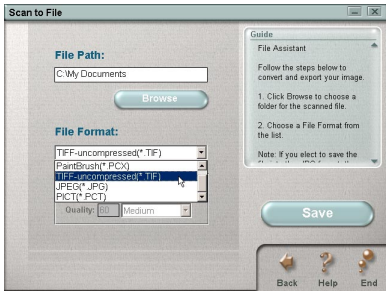
23. Click on COLOR button to set white and black points as well as a neutral point. Another advanced feature that allows you to determine the tonal range from shadow to highlight with an "eyedropper' tool which samples a color. If you're unsure of yourself, stay away from this one for now. We will be teaching you more advanced and accurate color correction in Photoshop later in the Course.

24. Clicking the AUTO button automatically determines the best exposure data for your image. Most scanner software will give you excellent results with automatic control of color and exposure. Clicking this button will not open a dialog box – it will simply adjust configurations for you. I would recommend starting here.

25. Click the Scan button. The scanning process starts. Like the pre-scan most scanning software provides you with a progress bar to let you know how long it will take.



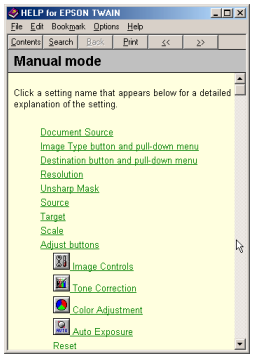
27. Name your scan. Remember logical names can help in identifying as well as organizing digital files. I name mine "hot_air_balloon".



28. Locate/Create a destination for your scan. Choose a format for your scan. Choose your format based on how you are going to use your finished scan. I choose the TIFF format because I want a high quality scan with no compression.

When scan is complete and saved, close the scanner software. Or hide it if you intend to do more scanning. Now it's time to open your digital image editing program and optimize your scan. These steps will be covered in detail in Unit Three.

The process is pretty straightforward. Epson's software offers a great HELP feature. Clicking on the HELP button opens the Help window which provides some basic explanations to all the buttons and features. See if your scanner software provides something similar and explore it.



Conclusion:
Even if you haven't done a lot of scanning, most scanner software will give you excellent results with automatic control of exposure and color. The trick is to start with a good original print. By starting with a good original, you won't have to make a lot of corrections. If you have some time (and curiosity) don't be afraid to try some of the manual controls, but understand that in the next Unit, we will insist on doing the majority of our corrections in Photoshop. The reality is that often a correction to an image can be destructive to the original pixel structure. Working in Photoshop we can show you the exact steps to take to optimize your image, while doing the least amount of damage. That's not to say that you shouldn't try to correct your scans, it just means that some methods are better than others. While whatever scanner software you are using may or may not be adequate for great corrections, we can confidently say that Photoshop is more than adequate.

Basic Scanning Checklist:

1. Confirm scanner connection;
2. Scanner power on;
3. Computer power on;
4. Start scanner software;
5. Open scanner cover;
6. Check art/glass platen for cleanliness;
7. Place art face down on platen;
8. Close scanner cover;
9. Menu Command File>Scan;
10. Scanner interface appears/scanner options. Ask yourself "what do I want to do with my scan?"
11. Choose your document source
12. Choose the what type of original you're scanning;
13. Choose a destination;
14. Choose an output resolution;
15. Click Preview;
16. Check Preview;
17. Constrain scan marquee to actual scan area;
18. Select Auot or Adjust Image, Tonal, Color corrections if necessary;
19. Click scan;
20. Name the scan;
21. Locate/create a folder and give it a name;
22. Choose a format for your scan;
23. When scan is complete open file in an image-editing program for any retouching.