CHAPTER 1

Preparation for Working with Old Historical Photos

This chapter will discuss how to prepare your photos for scanning as well as what kind of scanner may be best for your project and then how to proceed with the scanning and saving of the scan file.

Note this chapter does contain projects found in the Volume 1 Chapter 1 folder. Note that in my previous books, such as *Accurate Layer Selections Using Photoshop's Selection Tools* and *Creating Infographics with Adobe Illustrator: Volume 1*, the focus was on scanning sketches which did not necessarily require a high degree of quality in regard to color and resolution, and so a scanner that could scan slides was not required. In this chapter, we will be assuming that, besides photo prints, you will also be scanning slides and negatives, so some new topics not discussed in those books will be discussed here.

J. Harder, *A Beginner's Guide to Digital Image Repair in Photoshop: Volume 1*,
https://doi.org/10.1007/979-8-8688-0450-2_1

Brief Photo History and Reason for Photographic Damage

As mentioned in the introduction, most photos in recent years are taken with your digital camera, which may be a separate piece of hardware (physical digital camera) or an application that is part of your smartphone which has a built-in camera. What we understand as photography has been around since the 1700s – the process of trying to capture and retain images on light-sensitive materials; the use of dyes to preserve that image on a substrate whether a film or a paper. Over the centuries, the camera evolved from using glass plates and paper to film starting around 1888 and then on to digital in 1975. However, up until the early 2000s, when digital cameras improved and became more affordable, it was still common for people to use film cameras and to store their prints in an album, negatives in sleeves, or slides in a reel or box to keep them dust-free and away from the light. Refer to Figure 1-1.

Figure 1-1. *Collection of storage options used to store print photos as well as film slides and negatives*

While this book's purpose is not to go into the history of photography, negatives, and slides, it's still important to know a bit about why the items you are reviewing may appear damaged.

In the case of prints and film (negatives and slides), oftentimes the dye on the paper or in the film emulsion in combination with dye couplers does age and fade when exposed to the light or due to other environmental issues, such as temperature, moisture, and humidity. In the case of damage to slides this can often leave us with many instances, depending on the film brand, in which normal colors of red, green, and blue sensitive layers have begun to fade and become solidly red, green or blue, this

is often dependent on the dye that used in the manufacturing process. Over time, for example, when a slide becomes red, it means that the cyan dye has become unstable and chemically broke down, leaving only the red (magenta) and maybe yellow dyes. Note that for film, the dull side is considered the side with the emulsion. Refer to Figure 1-2.

Figure 1-2. *Aged film turning red, a purple-blue color, and normal colorizing*

Likewise in other media like the paper displaying the printed image, these dyes can also break down and fade when exposed to the light. Also, if exposed to certain glues for mounting the image in place, the adhesive chemicals soak into the paper; they are acidic, this yellows the paper. You may recall seeing albums with the clear plastic that seals the photographs onto the glued white cardboard. Refer to Figure 1-3.

Figure 1-3. *Pages from an album with the images mounted with glue and covered with plastic seals*

This is one of the worst things you can do to a photo, so care must be taken to remove the image without ripping the photo. If you have any of these, transferring them for now into an album with just plastic sleeves and no glue or tape is a better option. The plastic sleeves should be ones that are for photo protection and do not contain PVC or PVA plastics. Also, researching archive storage boxes is another option.

The film of the slides and negatives can turn yellow over time and become brittle. Also, if the film is handled incorrectly and touched with ungloved fingers, the natural oils in our skin can erode the emulsion, and our fingernails can scratch it and the shiny film side as well. Having clean hands and a pair of white lint-free cotton or nitrile gloves is good for this kind of work. Avoid gloves that have been pre-dusted with chalk. On the shiny film side (not the dull emulsion side), if you do need to clean any fingerprints off, you can try a microfiber cloth or a cotton swab and a

small amount of 91–99% Isopropyl Alcohol and rub the spot very gently to remove the fingerprints. Do not use water which may soften the film gel. Practice on a piece of film first which you are not concerned about damaging. Your local photo lab or museum may have some suggestions as well. Refer to Figure 1-4.

Figure 1-4. *Carefully cleaning the shiny side of a black and white negative with gloves and a cotton swab dipped in Isopropyl Alcohol*

Note that Isopropyl Alcohol is both poisonous and flammable. Read instructions on how to use small amounts correctly and also store and keep out of reach of animals and children.

Some prints, if stored correctly under the right conditions like in a museum or archival vault that is regularly monitored, can last hundreds of years. This is not the case in our own homes where our main focus is not continuously on historical preservation. This is why in your collection, there may be a few pristine images, but more than likely many will have a torn edge, rips, and creases.

One final "damage" factor that I will mention before we look at scanning is the fact of whether the photo was taken professionally or not. Whether it is recent or not, there is still the possibility of dust being on the lens, parts of the image being out of focus, and over- or underexposed and unintended objects, animals, or people appearing in the shot. These too can be things that we may want to "correct" as well, and much of this can be done with Photoshop as you will see in the following chapters. These are all factors to consider when deciding what level of authenticity your historical images should retain.

Organization of Your Photos

Before you begin scanning or if you don't have a scanner yet and need to purchase one, take some time to organize your prints, slides, and negatives into piles on the table or in boxes. Note how some negatives and slides are larger than others, and this will be important, as I will explain why shortly.

Some tools that may be helpful during your organization will be a magnifying glass, gloves to avoid touching the film (as mentioned in the previous section), and a small light table, and if the slides you have been given had an original projector, that can be helpful as well and save some time. Refer to Figures 1-5 and 1-6.

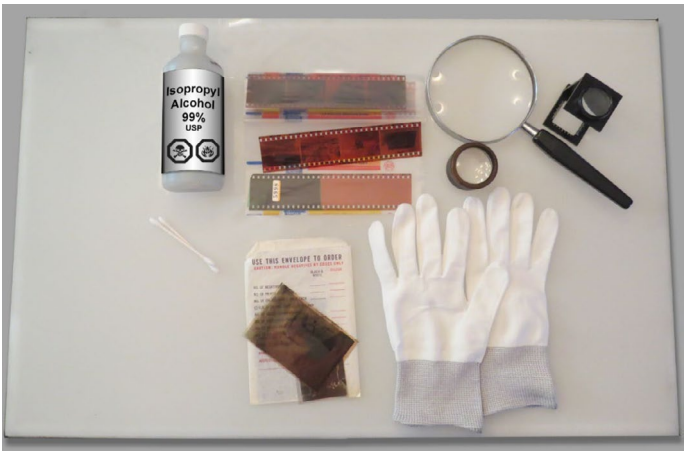

Figure 1-5. *Some of the tools that you may need to review your film slides and negatives while cleaning with Isopropyl Alcohol, magnifying glasses, cotton gloves, and a light table*

Figure 1-6. *Review your slides with the original slide projector if possible*

At this point, culling through what you do not intend to scan is all part of the organization process.

The main piles that you want to create are

- Prints larger than 8.5x11: This could be, for example, large family portraits in black and white or sepia, but color prints as well.
- Prints smaller than 8.5x11: This could include very old sepia or black and white image that are mounted on a thick card stock. Some of these may be over a hundred years old. Others will be the more modern color prints. Refer to Figure 1-7.

Figure 1-7. *Organize your prints into piles as you work on them*

- Negative film: You may want to separate color negatives and black and white into piles as well as thinner and wider sizes. Leave the film in its plastic sleeves as you sort. Examples of most common sizes would be 135 (24mmx36mm), 126 (28x28mm), and 110 (13mmx17mm). However, do expect a few that do not fit these ratios, depending on the camera that was used, such as the larger 120/122 medium format film. Refer to Figure 1-8.

Figure 1-8. *Organize your film negatives into piles of color and black and white of various sizes*

- Slides (positives): Like slides, negatives come in a variety of sizes too, but the most common is 50x50mm or 135; however, they can vary in thickness of the paper or plastic that surrounds them. It's important to keep common thicknesses and sizes together, during your organization. Refer to Figure 1-9.

Figure 1-9. *Organize your slides into various categories and observe the thickness of the paper and plastic slide holders*

Also, while working on the slides, note if any are falling out of their holder and set aside; do not run these through the projector as they may be damaged further. Instead, view them on a light table with your magnifying glass. These, however, should be OK to scan later on a flatbed scanner.

Scanner Purchase

In this chapter, we will now begin with looking at the kind of scanner that you can use to start digitizing your photos as well as when to use Photoshop's dialog box to do the scanning, when to rely on the scanner's dialog box, and finally how to complete the scanned process in Photoshop, view the scanned image, and review it. As you will see, there are various options to digitize your prints and slides based on their physical format.

To begin, it is important to determine what kind of scanner you require. Most flatbed scanners can be acquired at an office supply store or online. For basic photo, artwork, and document scans, they are quite affordable, and many brands are compatible with Photoshop. Refer to Figure 1-10.

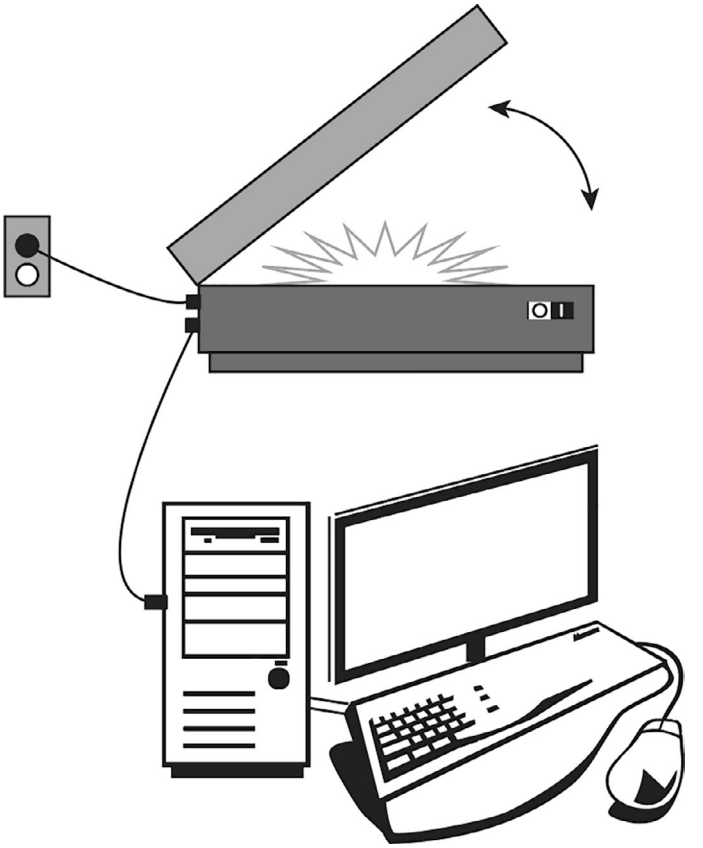

Figure 1-10. *An illustration of a flatbed scanner connected to the tower of a computer and wall power supply*

If you are only working with a photographic print or already have a scanner that does not scan film, you can begin your process of scanning these images with your flatbed scanner. In most cases, the size of the print will be under 8.5x11.7 inches, which is slightly larger than a letter size. However, for those that are over 8.5x11, if higher quality is important you may need to research online for a photo or archival service that can scan large format artwork. Or you could try using your digital camera and taking a picture of the image yourself while the digital camera is mounted on a

stable tripod to avoid camera shake. I'll mention this option at the end of the chapter. Alternately, you can scan your large photo in sections or separate images, but this will require you to "stitch" the image together again in Photoshop. If you plan to do that, just make sure you have enough of an area to move your image around the scanner to accommodate the paper size so that nothing collides or bends the paper, causing further damage. Refer to Figure 1-11.

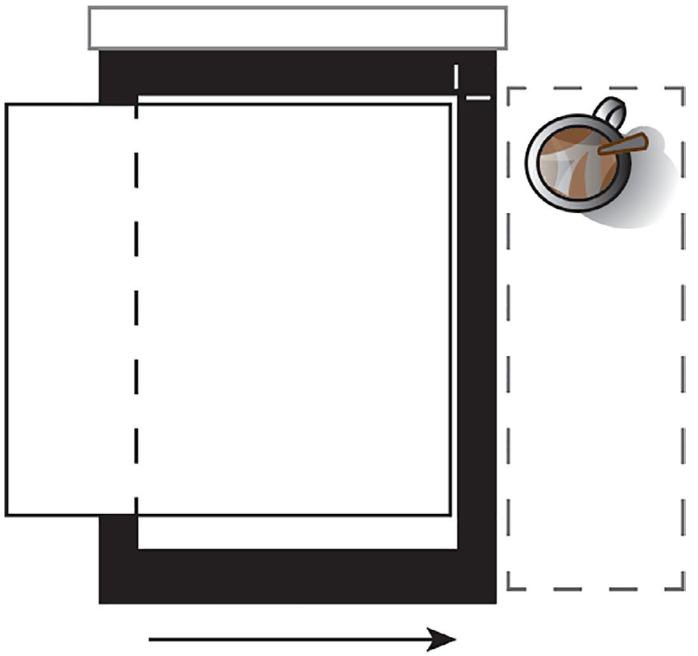

Figure 1-11. *An illustration of a photo print that is too large for the scanner: it needs to be moved to scan twice, but there is a coffee cup in the way that should not be there, as they may collide*

However, if the flatbed scanner that you have does not specifically mention that it can scan negatives and slides, you will have to consider purchasing one or looking into other services that can do that. Though not a topic of this book, it should be noted that some of these services, which would be available through your local photo lab, print house, library,

or museum, may even be able to offer services to digitize movie films and audio tapes or reels. However, while I will not discourage you from researching these services, if you want to give your slides and negatives the attention they deserve, I recommend looking at two scanner options.

Types of Scanners for Film Slides and Negatives

For a scanner to scan any kind of transparent film and prints, it needs to have two light sources, one from above (backlight transmissive) for film and one from below for prints (reflective). A scanner that only scans prints has one light source from below which is reflective. Refer to Figure 1-12.

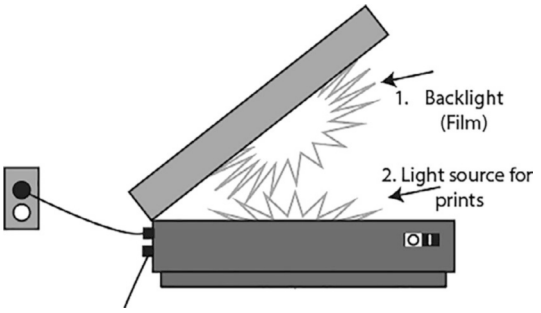

Figure 1-12. *An illustration of a scanner with two light sources showing the location of the lights*

While it is not impossible to add a backlight source above your flatbed surface, I have done this using the following:

- A handheld LED white/RGB light wand set to white lighting.
- Covered the light and the film with aluminum foil to increase the light.
- Placed a thin white tissue paper in between the film and light wand to diffuse any light glare. Refer to Figure 1-13.

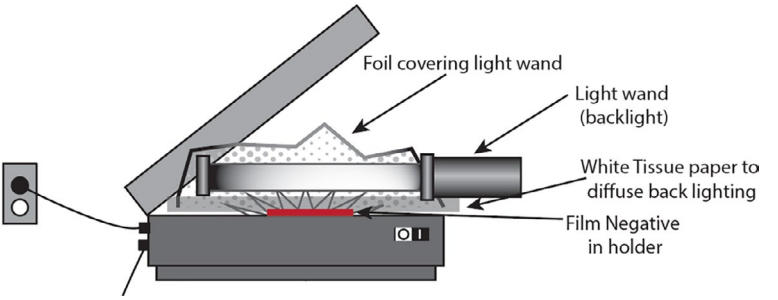

Figure 1-13. *An illustration of how I worked with my scanner when it would not allow me to scan the film*

I had to do this when the light above my older film flatbed scanner stopped working due to a software upgrade and I had a deadline. While this work-around may be OK for a few slides or negatives, this is not an ideal solution as you will want to be scanning for a print quality. What is considered a good resolution (300–600dpi [dots per inch]) for paper scans is not ideal for tiny negatives and slides as they need a much higher resolution such as 1200–12,800dpi to be blown up accurately later for a print. I'll discuss more about resolution options shortly. Also, in most cases, when scanning film only, the backlight is active while it moves with the scanner head, and the front light is inactive.

Here are two scanner solutions that I would suggest.

Portable stand-alone digital film scanner with a large LCD screen: This is a good option if you already have a flatbed scanner or need to work in various locations in your house or a house not near your personal computer. You only need to plug the scanner into your wall, and it does not need to be connected to your computer while you work. The images are transferred onto your SanDisk Ultra PLUS SDHC™ UHS-I Card which is 32GB (gigabytes); this is the same kind of card that you would use in a digital camera. The film images are loaded and viewed one at a time, and the scans are completed with a click of a button, which is quite fast. You can then take out the card and insert it into your laptop or home computer

and copy them off the card to work in Photoshop. Refer to Figure 1-14. I like that these types of scanners can scan 50x50mm slides and can handle several slide thicknesses, color negatives, as well as black and white negatives in various common sizes:

- 135: 24mmx36mm
- 126: 28mmx28mm
- 110: 13mmx17mm

Figure 1-14. *An illustration of a portable stand-alone digital film scanner, plugged into the wall with a holder and an SDHC card*

Note some portable scanners will also come with the option to scan 120/122 medium format film. In my case, I was experimenting with the Hammacher Schlemmer model, which does not have the option of medium format film. For each type of slide or film, there are separate holders, and the highest resolution is around 3200dpi.

This kind of scanner comes with built-in software that can correct for dust and scratches as well as basic brightness and color adjustments, which you can always choose to do later in Photoshop yourself. However, there are a few drawbacks with this option. If your slides or negatives are oversized and not the common sizes, parts of the images will be chopped off during the scan. You may be able to compensate slightly by turning the film around to

do a second scan or try to insert the film without the adaptor/holder in place, but you would later have to stich the two images together in Photoshop; the point of the adaptor is to keep the film level straight, which is not easy to do without the adaptor. Also, while the stand-alone scanner is fast, if you want to scan several slides or negatives in one scan this is not possible.

Flatbed photo scanner with the option of slides and negatives: This is best if you do not have a scanner yet or need to upgrade your current flatbed scanner. With this type of scanner, it will have a direct connection to the computer so that you can work on your photos right away in Photoshop, which I will talk about in more detail shortly. This type of scanner is ideal if you need to scan your reflective prints up to 8.5x11 with a single light. The back or inner lid of the scanner is covered with a white document mat. Refer to Figure 1-15.

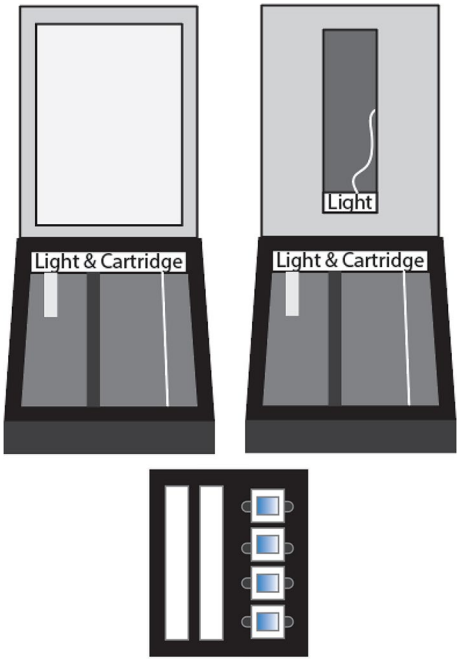

Figure 1-15. *A flatbed scanner with and without the mat cover and one of its holders for scanning film*

For film slides and negatives, these scanners have two lights; the document mat is removed to reveal the second light, and now the above backlight (transmissive), which is meant to illuminate the slide, is visible, while in this case the lower light that was used to scan the print is off, but the lower scanner cartridge inside the document table still moves with the backlight to capture the scan. Like the portable scanner for film, it can scan a variety of common sizes mentioned earlier. However, you can not only scan several in one scan, you can also easily move the larger film negatives or slides around to get a more accurate scan. As mentioned, for scans of prints larger than 8.5x11, you may need to consider contacting a photo lab or local library to see what options they would recommend. Flatbed scanners often come with additional adjustment options before entering Photoshop, which I will discuss later. For my testing, I was using the Epson Perfection V600 Photo model.

As with any electronic purchase, make sure you do some online research of the product first and check out the reviews of the product before you buy.

Scanner Basics Review (Maintenance)

Whether you are scanning slides or prints, it is important to keep your scanner, holder, and film clean and dust-free. If you have a portable stand-alone digital film scanner, make sure to read the user manual and use the recommended cleaning tools regularly before and after you finish scanning your projects so that dust and dirt do not build up on the glass, and keep your device away from extreme temperatures and high humidity. The same is true of the flatbed scanner, clean it regularly with the recommended cleaning cloth to remove fingerprints and smudges. Refer to Figure 1-16.

Figure 1-16. *An illustration of a person cleaning the flatbed scanner glass and removing smudges and dust before use*

Note you can use an eyeglass lens cloth to clean the surface of the glass and, if required, a mild glass cleaner if recommended by the manufacturer. Be careful not to scratch the glass as this can happen if you press down on the scanner lid and scan a booklet's coil that has any rough metal edges. Also, you should not have your scanner in an area of high humidity as the glass surface inside the scanner can fog up, leaving streaks which are difficult to clean.

For the flatbed scanner, make sure that your software drivers remain up to date so that the hardware can connect to the computer. Also, as with any printer, monitor, or scanner over five to ten years, the light gradually fades and loses its ability to calibrate colors accurately. The older scanner

hardware may be operational, but very likely is not the best for color photo scans where color is crucial for print or the Web. So you will want to monitor this over time and upgrade your hardware as required. Note this is not the same as the color correction you will be doing on your prints in Photoshop. However, it's important, if required, once you have finished a corrected photo, to print out a copy and compare with how it appears on the screen. We'll discuss that more in Volume 2.

As noted, if you have been using a portable stand-alone digital film scanner, consult the user manual to determine how to scan each slide or negative. If using the holders, make sure to place your film negative or slide in the correct orientation, keeping the dull emulsion surface facing towards the light source. Then, using a combination of the LCD screen to preview, built-in software, and scan buttons, each scan will be added onto the SDHC card, and then you can later remove it and insert it into your computer slot and preview on your computer. Note that if your computer does not have this slot, you can purchase a USB card reader adapter, which can accept a variety of card sizes. The file format will be an RGB color mode (.jpg), which you can open in Photoshop and get ready to start working on in Chapter 2.

However, for now let's discuss the assumption that you are working with your flatbed scanner and personal computer. Refer to Figure 1-17.

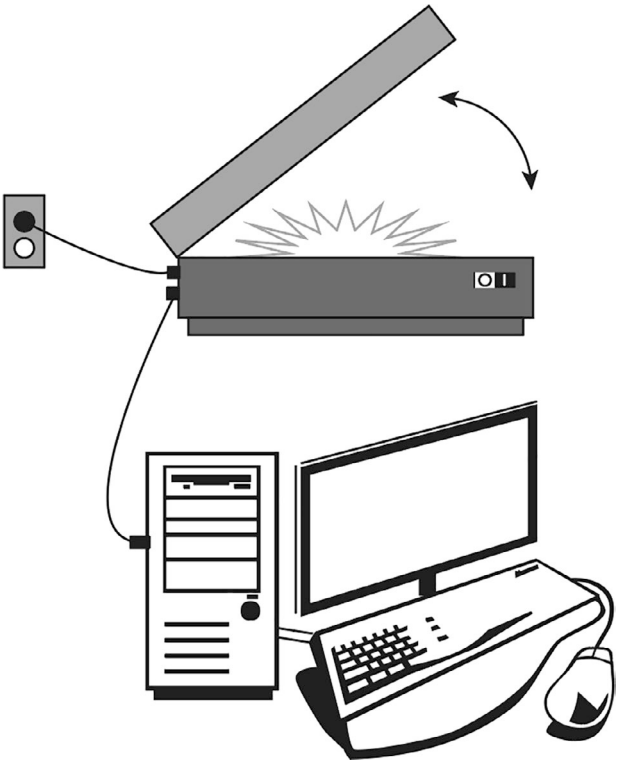

Figure 1-17. *An illustration of a flatbed scanner connected to a personal computer*

Make sure to take time to install the software and consult the online user manual if any of your settings are slightly different than mine. Once your scanner is set up and turned on, you can directly connect to it via Photoshop using the Wizard Assists (WIA). For photo prints, this is a quick way to scan. I have delved into this in more detail for scanning sketches in the past, in the books I mentioned in this chapter. However, in this book, I will just delve into it very briefly, because using this method does not work well for slides and negatives, and you must use the scanner's own dialog box to accomplish this.

Flatbed Scanner Option 1: Quick Scans of Photo Prints Directly into Photoshop

A flatbed scanner allows you to acquire the scan of a flat sheet of paper without the presence of outside light which could cause color distortions to your images. Some flatbed scanners will allow you to adjust the top lid so that it sits better on a large scan that has a higher raised surface. Other scanners have just a hinged lid so the bed might be exposed to outside light.

Ultimately, if you're dealing with a photo that is either raised on a card or in an album that has binding that does not bend well, I would recommend placing a dark cloth sheet over your scanner to prevent any outside light from coming into the scanner as well. Refer to Figure 1-18.

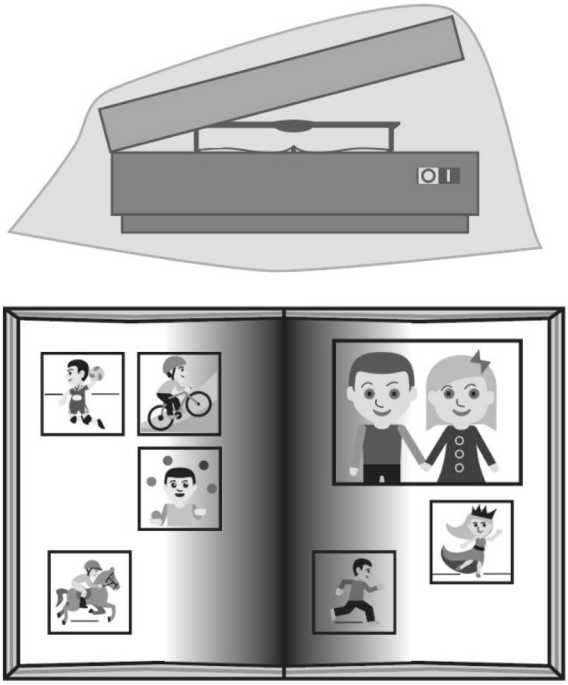

Figure 1-18. *An illustration of a flatbed scanner covered with a black cloth to prevent shadows and gutter shadow on an album, near the spine*

You may get a gutter or side shadow between the pages during the scan; if at all possible, try to get the scan as flat as possible by taking it out of the photo cover or album. Refer to Figure 1-19.

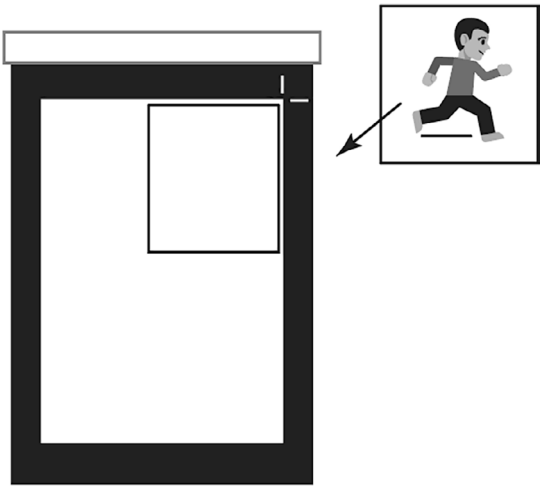

Figure 1-19. *An illustration of a flatbed scanner covered with a single image laid on the scanner bed face down for scanning*

Or if the prints cannot be removed from the album without damaging them further, you may have to use the lid of the scanner and with your hand gently press down to press the image a bit flatter.

Some scanners have software that can correct this gradient discoloration. However, you can use Photoshop and its adjustment layers afterward to clean this up and other issues, using a combination of selections and masks, as we will see in subsequent chapters and later in Volume 2.

In most cases, you will place your print face down on the glass in the upper right-hand corner next to the arrows or guides. If you are scanning multiple smaller images, place them as close together as possible using the right edge of your scanner as the guide, but try to avoid overlap.

Take a moment to review your scanner's manual or online specs as every one is built slightly differently, depending on the manufacturer. Your scanner should be able to scan at least 300–600dpi (dots per inch) or higher up to 2400dpi for a good quality.

In Photoshop, to connect to your scanner, you would make sure your scanner is plugged in and that it is turned on and connected to a USB port and that your computer is recognizing the device and the drivers are up to date. Most scanners have their own quick menu as well that you can access if you're not able to connect to Photoshop at first, but we will look at that more closely in the next section.

Adobe gives some helpful information on this topic of connecting to Photoshop. Depending on whether you are using a MAC or Windows computer, go to

https://helpx.adobe.com/photoshop/using/acquiring-images-cameras-scanners.html

Refer to Figure 1-20.

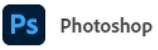

Figure 1-20. *Photoshop icon*

However, let me demonstrate how the typical procedure of image acquisition might go, though there may be slight differences depending on your computer or scanner version. I demonstrate the steps I use for my scanner in Photoshop CC 2024 on the Windows 10 computer. Refer to Figure 1-21.

Scanning the Photo

1. Once you open Photoshop, go to File ➤ Import ➤ WIA Support. Refer to Figure 1-21.

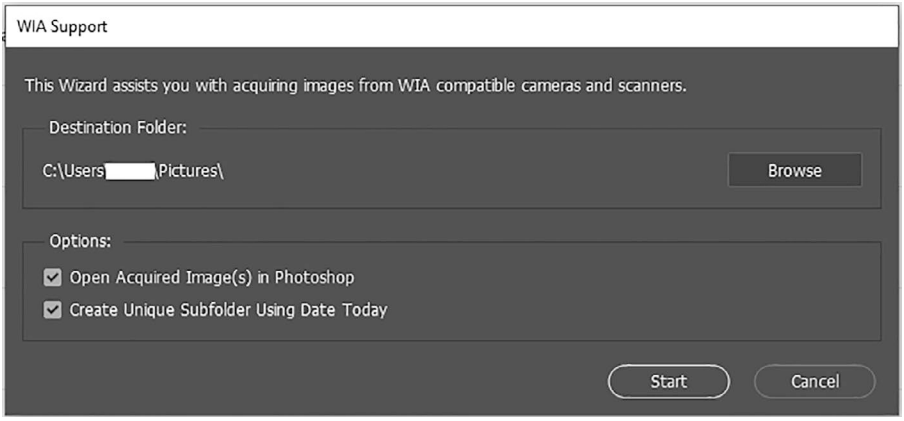

Figure 1-21. *WIA Support dialog box*

You will be presented with a dialog box where you will use the Wizard Assists or Windows Image Acquisition (WIA) to help you decide where you will place your scans. You can also use this area for compatible digital cameras should you be using a USB cable to connect. You would then browse for a Destination folder where the images will be stored and then choose to enable or disable options such as

a. Should the acquired images appear and open in Photoshop and when acquired by the scanner.

b. Should each image be stored in a unique, created subfolder using today's date so that you can review them later. Refer to Figure 1-22.

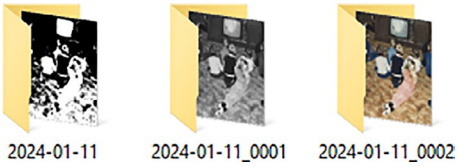

Figure 1-22. *Subfolders containing individual scans*

2. When you have made your selections, click the Start button to move to the next dialog box or click the Cancel button to exit and not save your changes.

3. When you click the Start button, you will then be presented with the Select Device dialog box; in this case, it lists the scanner which is selected and its properties which will vary depending on the manufacturer and driver setup as per setup instructions. As mentioned earlier for the scanner, always make sure your drivers and software are up to date, so the scanner will be recognized and appear here. Refer to Figure 1-23.

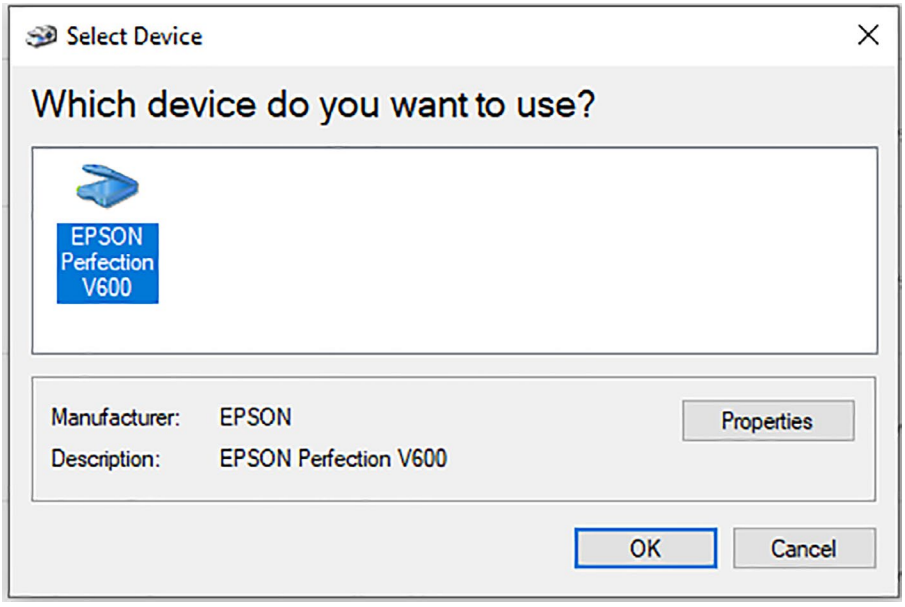

Figure 1-23. *Select Device dialog box where you can choose a digital camera or scanner that you want to acquire images from*

4. While it is selected, click OK. This should then take you to the scanner dialog box, and you will be presented with various options on how to scan. Refer to Figure 1-24.

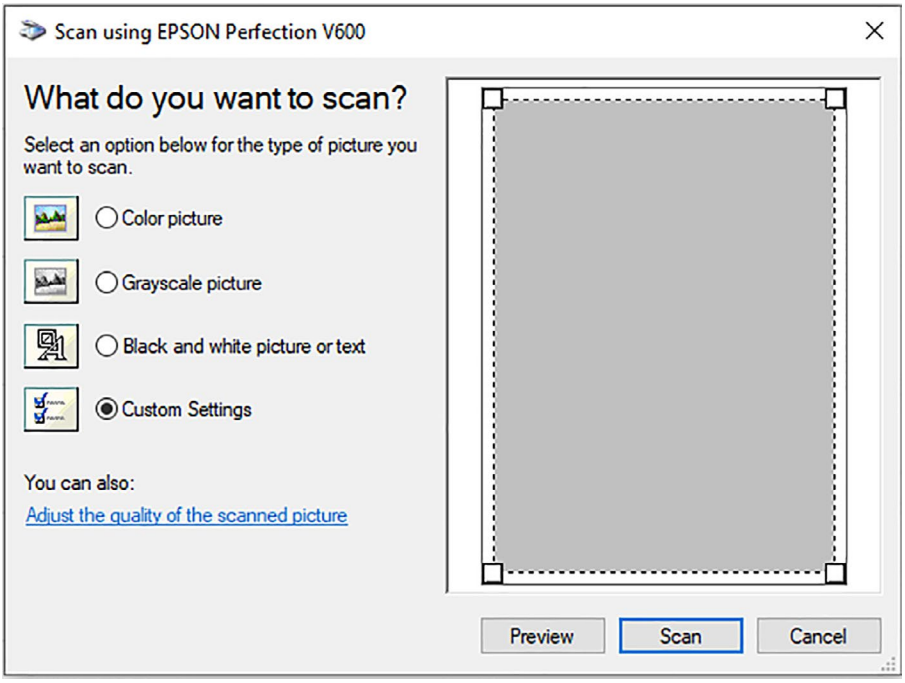

Figure 1-24. *Scan using WIA (scanner name) dialog box with its various options*

In my case for this scanner, I can scan a

- Color picture
- Grayscale picture
- Black and white picture or text

In most cases, when scanning a document, the default quick selections of color picture or grayscale are adequate, but I will choose those via the Custom Settings radio button and then click the lower link that says Adjust the quality of the scanned picture. This is best practice when working with print photos.

5. This brings up the Advanced properties dialog box, which gives me more options so that I can adjust the resolution to 300dpi (dots per inch) up to 600dpi or higher for other scanners. As well, I can adjust the brightness and contrast of the image. This can be reset as well. I generally leave those settings at zero and do that type of appearance correction in Photoshop, but depending on your scanner after some experimentation, you may want to move these sliders or whatever other settings are available for you. Refer to Figure 1-25.

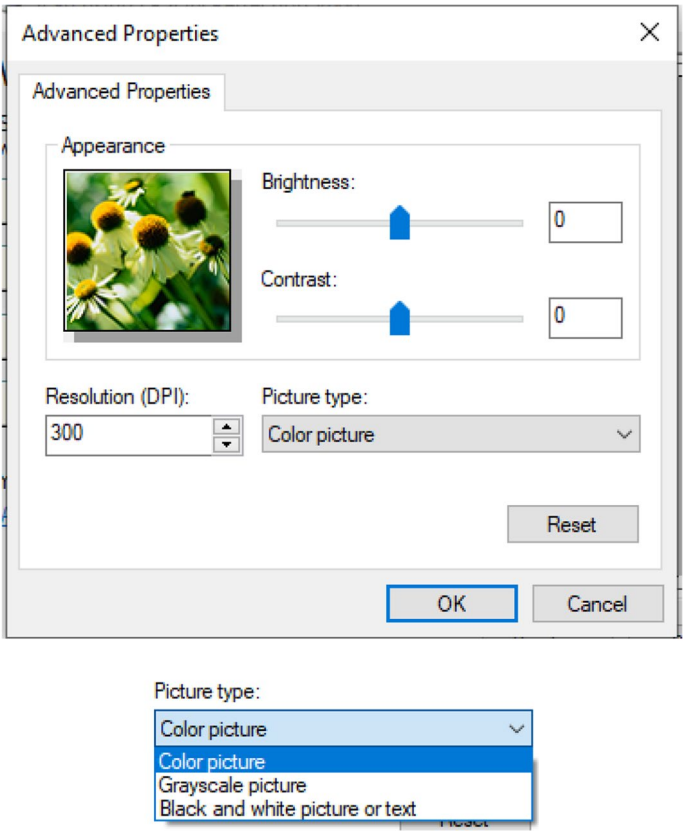

Figure 1-25. *Advanced Properties dialog box and various options*

Later in Option 2, I will look at how you can get additional setting from your scanner's dialog box.

6. I will then choose the Picture type from the drop-down menu, which is the same as the earlier choices, and click OK to confirm.

7. I would then place the image I want to scan on the scanner bed face down – in this example, in the upper right hand near the edge – close the lid, and in the Scanner WIA dialog box, click the Preview button. Refer to Figure 1-26.

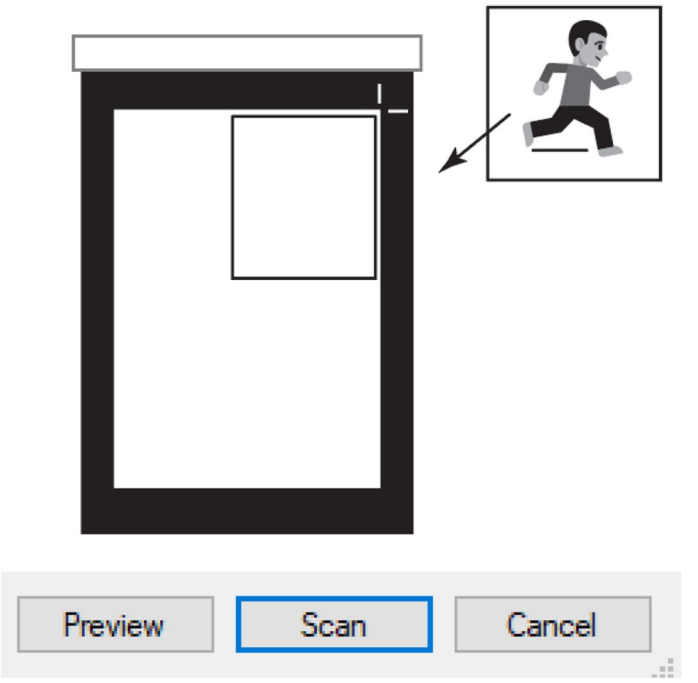

Figure 1-26. *Print is placed on the scanner face down, and then the Preview button in the dialog box is clicked to get a preview of the photo*

In this case, the preview does not create a copy of the image yet; it is just stored in memory until you are ready to click Scan. If you notice that your image is a bit slanted or rotated, you can always open the lid, move the print a bit from the center to the left or right so it's up against an edge, close the lid, and click the Preview button again. Some scanners will recognize the area of how large your artwork is and then will use their bounding box handles to crop or marquee to fit around that area, so you don't have to scan the whole bed. You should have the option of being able to drag the handles to the area you want to scan. However, some scanners, via their dialog boxes, will allow you to scan more than one area on the page into separate files, if required, by letting you draw more than one bounding box and then scan all at the same time. Refer to Figure 1-27.

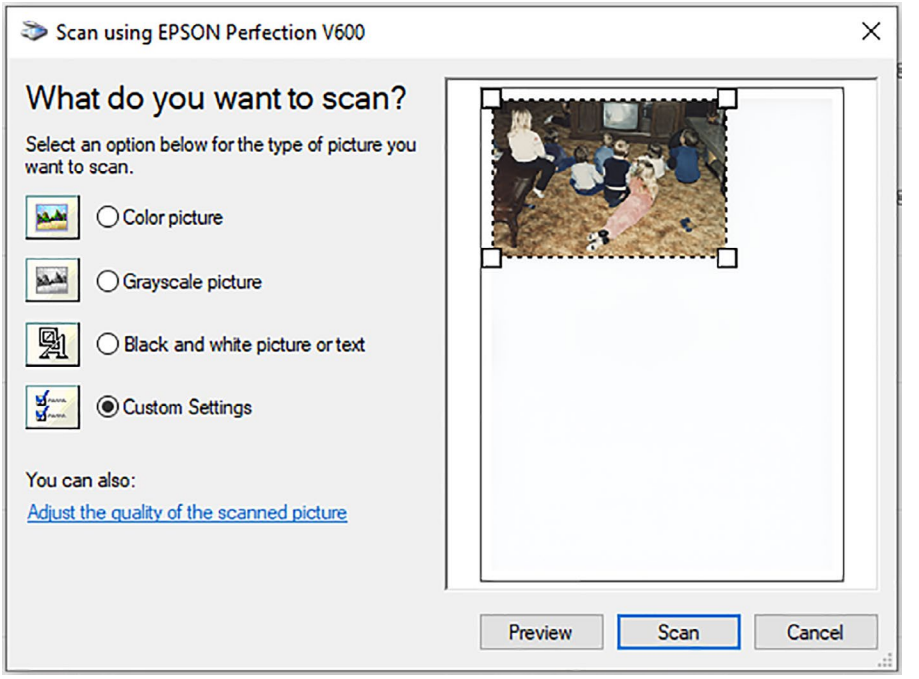

Figure 1-27. *Preview of the print appears, and I can use the bounding box to crop how much of the sketch I want to scan*

Scanner Color Modes

Now, depending on the setting you choose, different file color modes will be generated via the basic or Advanced properties. For my scanner here are some examples:

A color picture will produce a .bmp 8-bit bitmap file in RGB color mode. The file is generally larger than a camera .jpg file, but it is as good as a .tif file, and it will not lose quality as a .jpg would and can be stored for archival purposes. Refer to Figure 1-28.

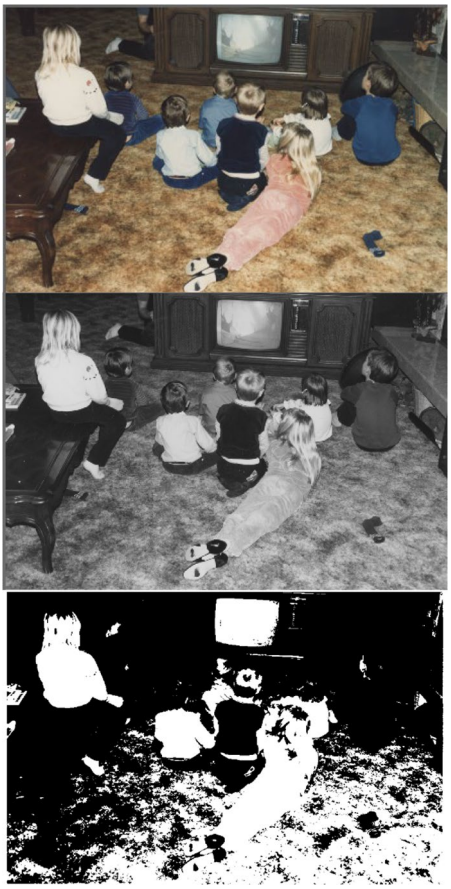

Figure 1-28. *Scanner results top to bottom for a color picture on white paper, grayscale, and black and white picture or text (bottom image)*

A grayscale picture produces a .bmp file; however, in this case, the color mode is Index and 8 bits. You can always convert it afterward in Photoshop, choosing from the menu Image ➤ Mode ➤ RGB color.

The black and white picture or text produces a .bmp file, but this time the color mode is Bitmap. I find this option to be the worst setting as the image is very grainy and broken. In most cases, even if the image is in

black and white, I will generally choose the Advanced properties of color picture as this produces artwork with the same or better detail than a digital camera.

1. Once you have made your setting choices, click the Scan button (see Figure 1-27), and the file will be transferred and appear in Photoshop and be saved in the destination subfolder that you set up earlier. You can check that it is 300dpi under the Image ➤ Image Size dialog box, and it will show the resolution to be 300 (pixels/inch), which is the same as the dpi setting. Click Cancel to exit that dialog box as you are not making any size adjustments. Refer to Figure 1-29.

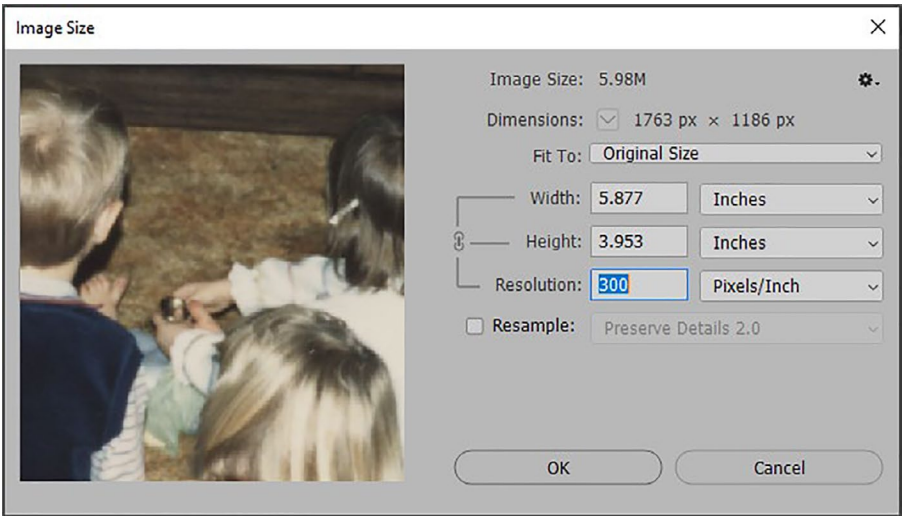

Figure 1-29. *Checking the resolution of the document using the Image Size dialog box showing 300 Pixels/Inch resolution*

Note that for some scanners, though you scanned at 300dpi using this method, they may come in expanded with a resolution of 72dpi. Instead, in that case, you can use your Image Size dialog box to correct this, but we will review this in Chapter 2. Refer to Figure 1-30.

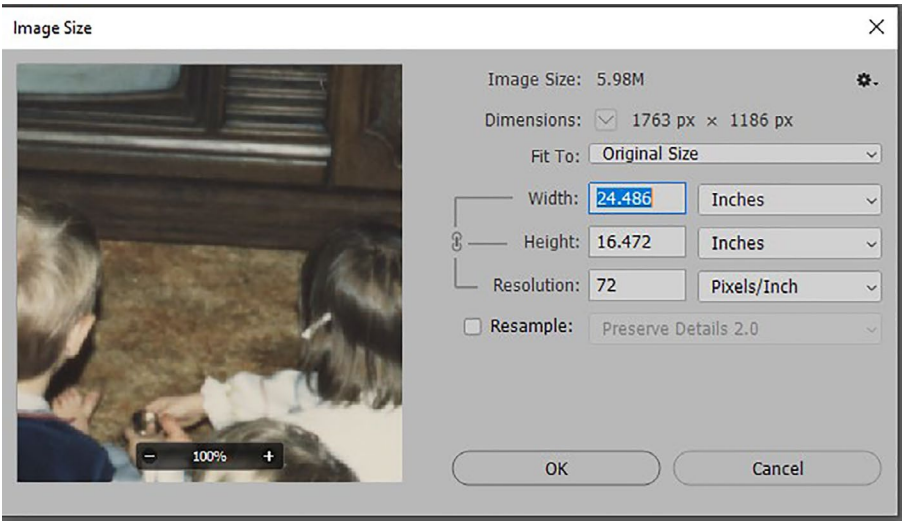

Figure 1-30. *Checking the resolution of the document using the Image Size dialog showing 72 Pixels/Inch resolution but a larger width and height*

Flatbed Scanner Option 2: Using Your Scanner Dialog Box for Prints, Slides, and Negatives

As noted earlier, while this is a fast way to scan your photos so that they directly appear in Photoshop, this is not the best way to scan your slides and negatives using the flatbed scanner as film settings are not recognized in the Photoshop dialog box.

In this next example, I will just point out that for prints you can leave the document mat cover of the scanner on and scan using the scanner's dialog box. However, when you need to scan your slides and negatives, you will need to remove the scanner document mat cover to expose the light in the transparency unit window so that the scanner will recognize you are scanning film. Refer to the illustration in Figure 1-15 and to your scanner's user guide on how to do this correctly.

In this example, you would then select the holder that is right for your set of slides and negatives and then proceed to the scanner's dialog box. Make sure that you review which side of the film should face the scanner glass (generally shiny side down or words if present are reversed). The scanner I am using has more features in the dialog box, and while I will not go into detail about all of them as your scanner may be different than mine, I will just point out a few that you should consider. In this case, the scanner has multiple user modes, and I am using the professional mode as it is most similar to the layout mentioned earlier in Option 1 when importing into Photoshop. Refer to Figure 1-31.

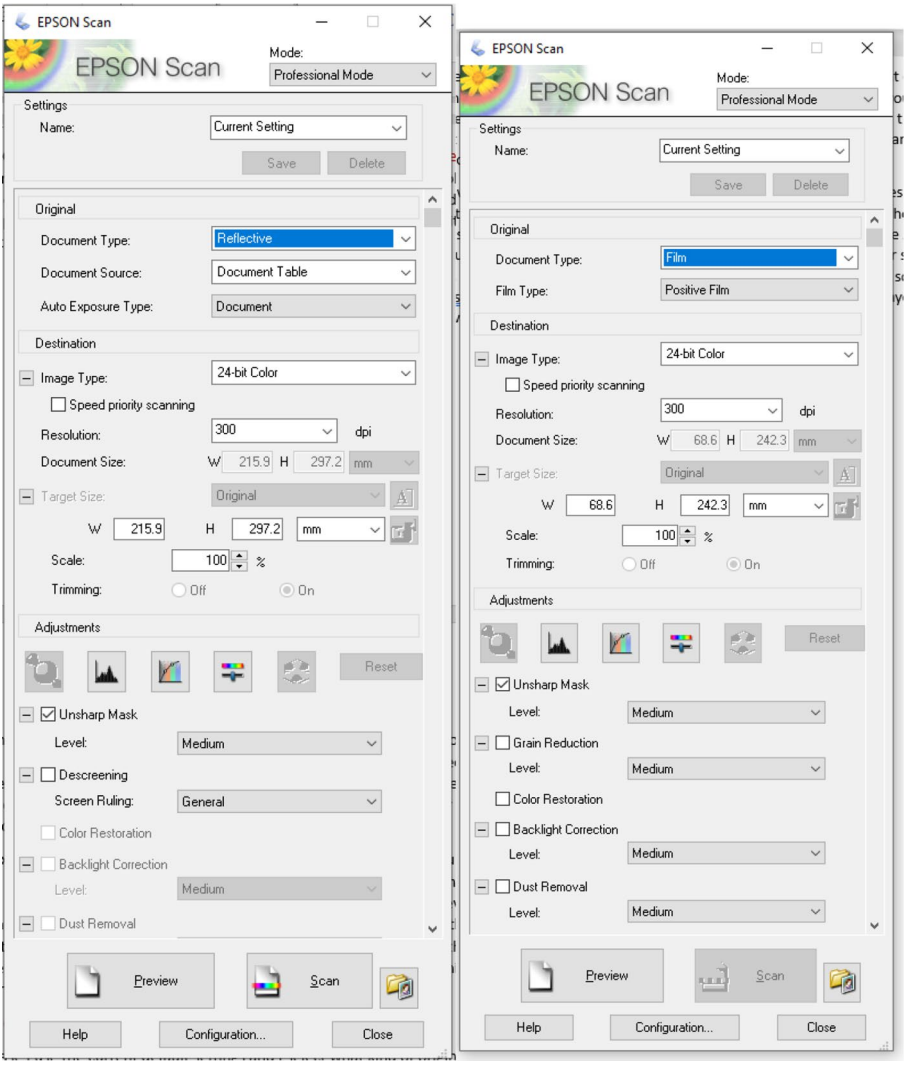

Figure 1-31. *Various settings may be available through your flatbed scanner that are not available through Photoshop as seen for the Epson Scan in professional mode*

In this case, I use the current default settings, and I select what kind of original document type I am working with. If I had not removed the document mat cover, I would continue using reflective mode for my print and then adjust my next settings in the dialog box, such as document source "Document Table," which is the glass surface, and Auto Exposure type, in this case, a photo and not a document. Refer to Figure 1-32.

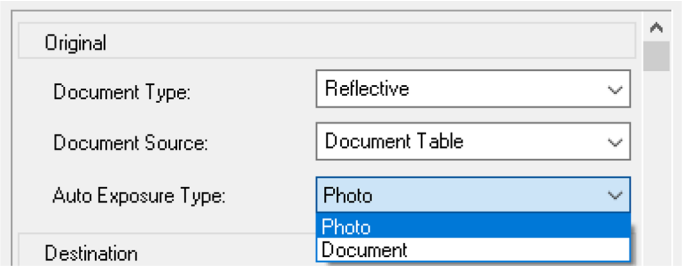

Figure 1-32. *Choosing to scan a photo (reflective) print using the scanner's dialog box*

When scanning film, after you have removed the document mat, you would then switch your document type to Film and then choose a film type (Positive Film, Color Negative Film, or B&W Negative Film) and then select the correct holder as described in the user manual and lay it on the scanner glass and insert the film or slides as directed. For example scan with the dull emulsion towards the upper light source which will appear as a reversed image to you, this can insure the correct orientation of image or text in the preview and later for the scanned image. Refer to Figure 1-33.

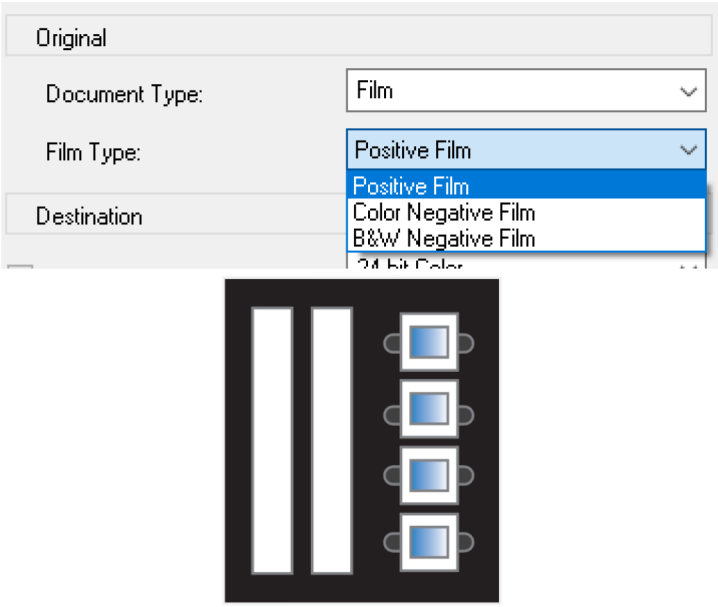

Figure 1-33. *Choosing to scan film slides using the scanner's dialog box and placing the film slides in the holder for scanning on the right; the left side of the holder would be for negative film strips*

Next, whether you are scanning prints or film, you would select from the options presented in the image type or color mode: some options in this example are 48-bit color, 24-bit color, color smoothing, 16-bit grayscale, 8-bit grayscale, and black and white. In most cases, I would suggest experimenting with the color settings even if the print is black and white. In this case, by default, it is set to 24-bit color which produces an 8-bit RGB file (each color channel has 8 bits (8x3)). However, some slides may benefit from the 48-bit color setting, but it will still appear as an 8-bit RGB file when opened in Photoshop. I left the speed priority scanning unchecked. Refer to Figure 1-34.

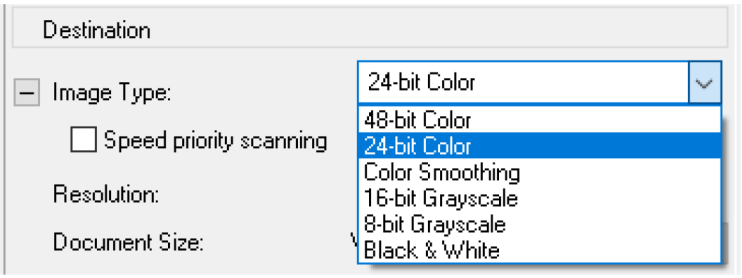

Figure 1-34. *Choosing a color mode from the scanner dialog box for a color print*

Note that the image smoothing for my scanner will produce a type of posterized effect, and I would not recommend this setting or black and white for archival photos. Refer to Figure 1-35.

Figure 1-35. *Choosing a color mode of color smoothing for this print from the scanner dialog box is not the best choice; in this case, it would be better to use 24-bit color*

Next, set the resolution as this will affect the size of the file. For prints, setting it at 300–600dpi is generally best, but you may want to make it a higher number if you plan to make a larger print, though be aware that the graininess of the photo will likely determine how much you can enlarge the image without losing quality. Refer to Figure 1-36.

Figure 1-36. *Choosing the correct resolution for your prints or film*

For film and negatives, experiment and use a much higher setting between 1200 and 12,800dpi. Note that if you are using a portable scanner that can scan at either 2400dpi or 3200dpi, this may be a good number to set on the flatbed as well if you want to compare scanning between the two products.

Then you will want to compare your document size and set a target size as required, based on either manually setting it in mm, inches, or pixels or a set ratio scale. Trimming may be on or off depending on other settings. Notice that if you wanted to have the image to be twice the size of the original at 200%, the target size will now be different than the document size. Refer to Figure 1-37.

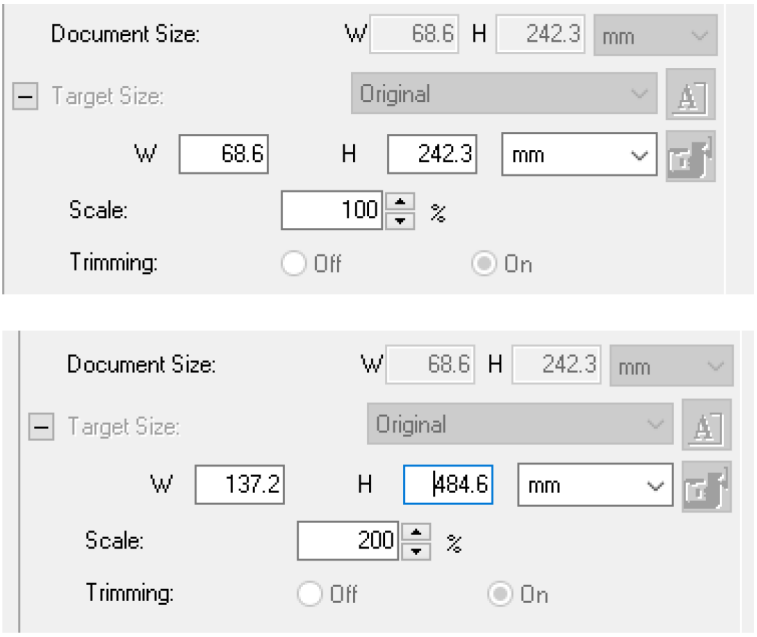

Figure 1-37. *Changing your scale from the original to the new target size*

In the case of film, once the resolution is set and you have clicked the Preview, as you will see shortly, you may need to adjust the target size to one of the presets, so the file size is not too large. In this case, you would adjust the resolution down to match the higher scaling size that you want. Refer to Figure 1-38.

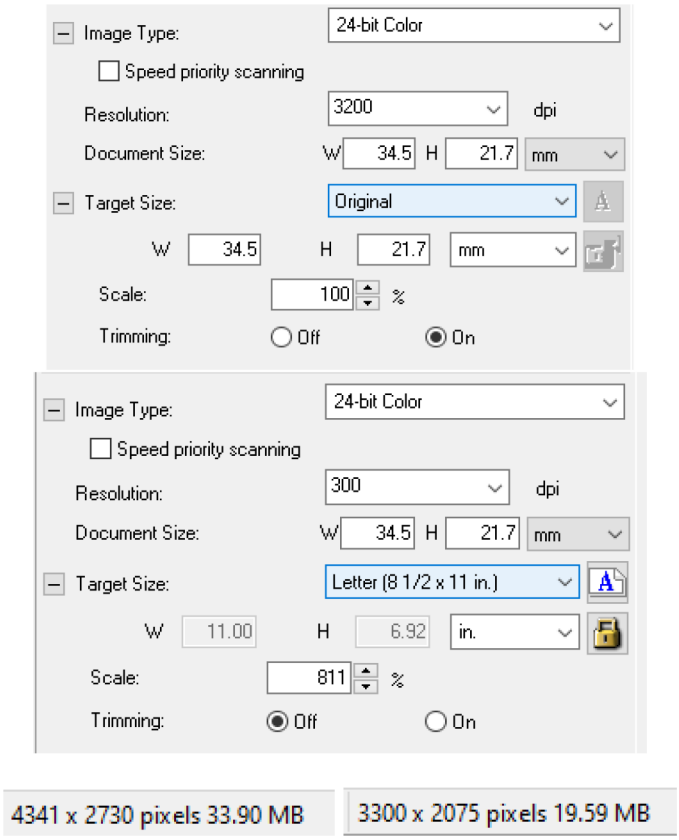

Figure 1-38. *Altering your target size through scale and trimming and resolution for film after you have run a preview and compare possible file size*

You will also notice that the scanner has some additional adjustment correction software that comes with it. I will leave these on the default setting as I make most adjustments in Photoshop. Depending on the scanner, using dialog boxes that appear when you click the various buttons, you could correct such things as autoexposure, histogram adjustment, tone correction, image adjustment, and color palette. These have slightly different names in Photoshop, and we will look at that more in Volume 2. Refer to Figure 1-39.

Figure 1-39. *Various adjustment settings that may be offered in the scanner's dialog box*

Additionally, you also have some filter-like adjustments that affect blurriness, grain, color, backlight, and dust removal; you will learn about similar filters in Volume 2. Reading Volume 2 will give you a better idea of how to use them with a scanner, and you can then compare whether to use your scanner settings or the ones in Photoshop. For now, I will leave them at the default with Unsharp Mask on set to a level of Medium, but consult your scanner's help menu if you need more details on these settings. Refer to Figure 1-40.

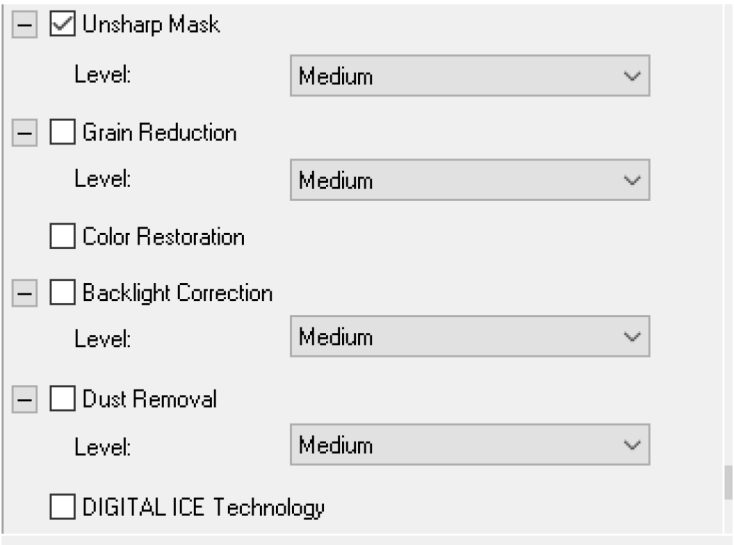

Figure 1-40. *Additional filter-like adjustment settings that may be offered in the scanner's dialog box*

Note that in the case of color and black and white film negatives, your scanner may have the software to automatically invert them into positives. If not, I will show you in Volume 2 how you could do this.

Before you click the Preview or Scan button as you did in Option 1, locate the File Save Settings so that you know in what folder you are scanning the digital images to and, if required, adjust to a new location other than the Pictures folder. Refer to Figure 1-41.

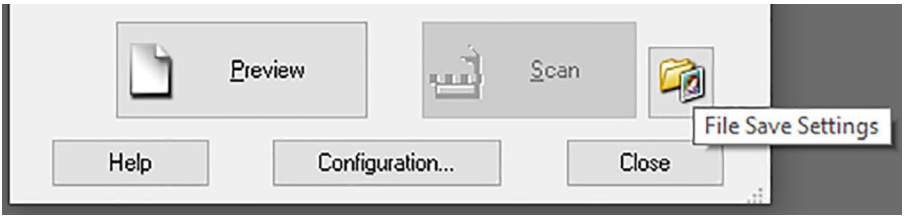

Figure 1-41. *Checking the File Save Settings destination from the scanner's dialog box*

This scanner also allows me to adjust the file format choice. For now, I will leave it on the default of JPEG, though in other situations you may want to use a TIFF (.tif) or BITMAP (.bmp) file as you saw in Option 1 if you are concerned about file compression. For a document, you can scan to a PDF, but make sure to consult the dialog box's help menu if you need more information on what setting to use.

Other settings may be present as well for what to do for the next scan and whether the folder that contains the image should open automatically.

Click OK if you make changes or Cancel without making changes to exit. Refer to Figure 1-42.

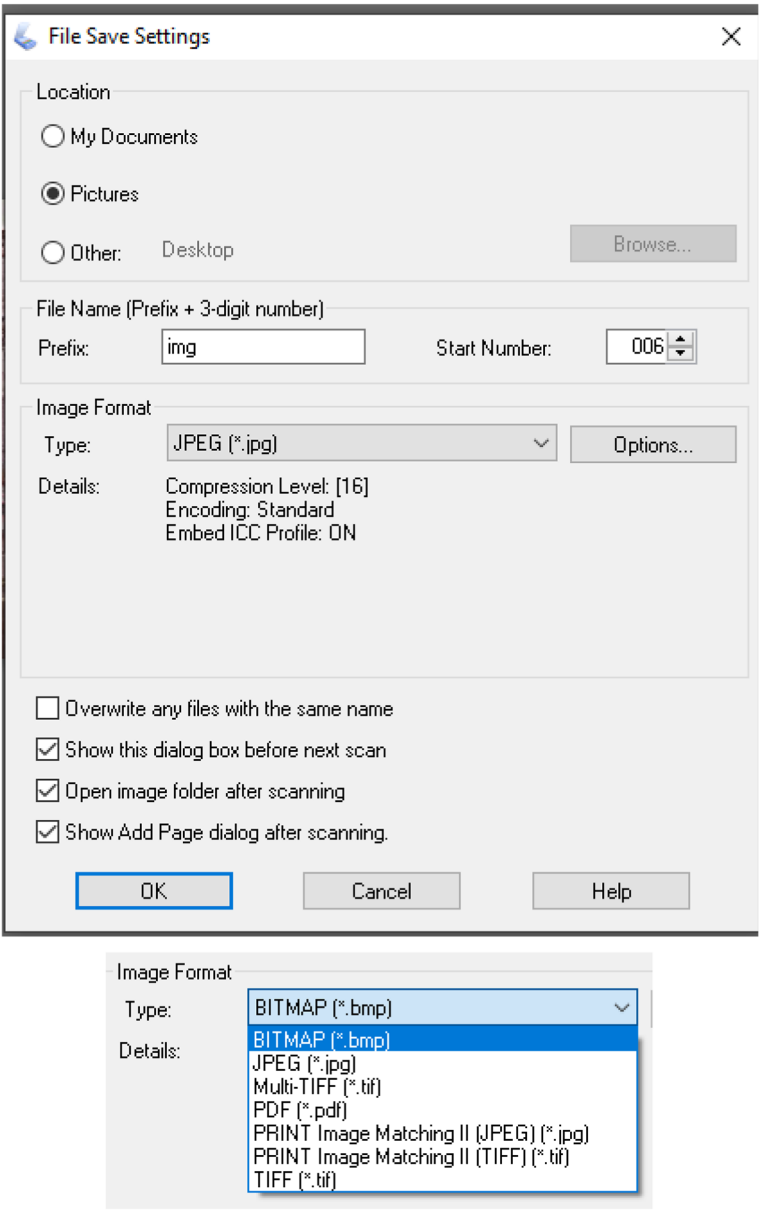

Figure 1-42. *Scanner's File Save Settings dialog box and some possible image format options*

To begin the scan now, click the Preview button. This dialog box will have more options to zoom in and allow for single or multiple cropped scans when you marquee areas as well as rotation of the preview. Once you have the settings you need for the scanner, leave the preview open and click the Scan button, and again the File Save Settings dialog box may open just to confirm where you want to scan to. After clicking OK to confirm the File Save Settings, the images will transfer to the location you assigned. In this example, the files will not open automatically in Photoshop but will appear in the chosen Location folder. Refer to Figures 1-43 and 1-44 for some examples with prints and slides in the Preview dialog box.

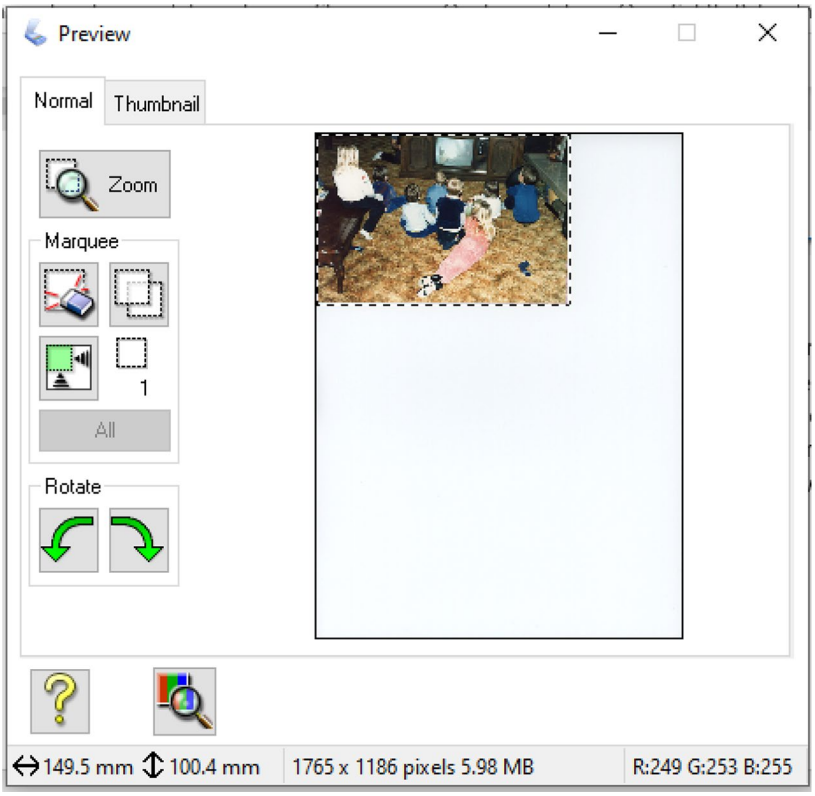

Figure 1-43. *Previewing a print in the scanner's Preview dialog box before scanning*

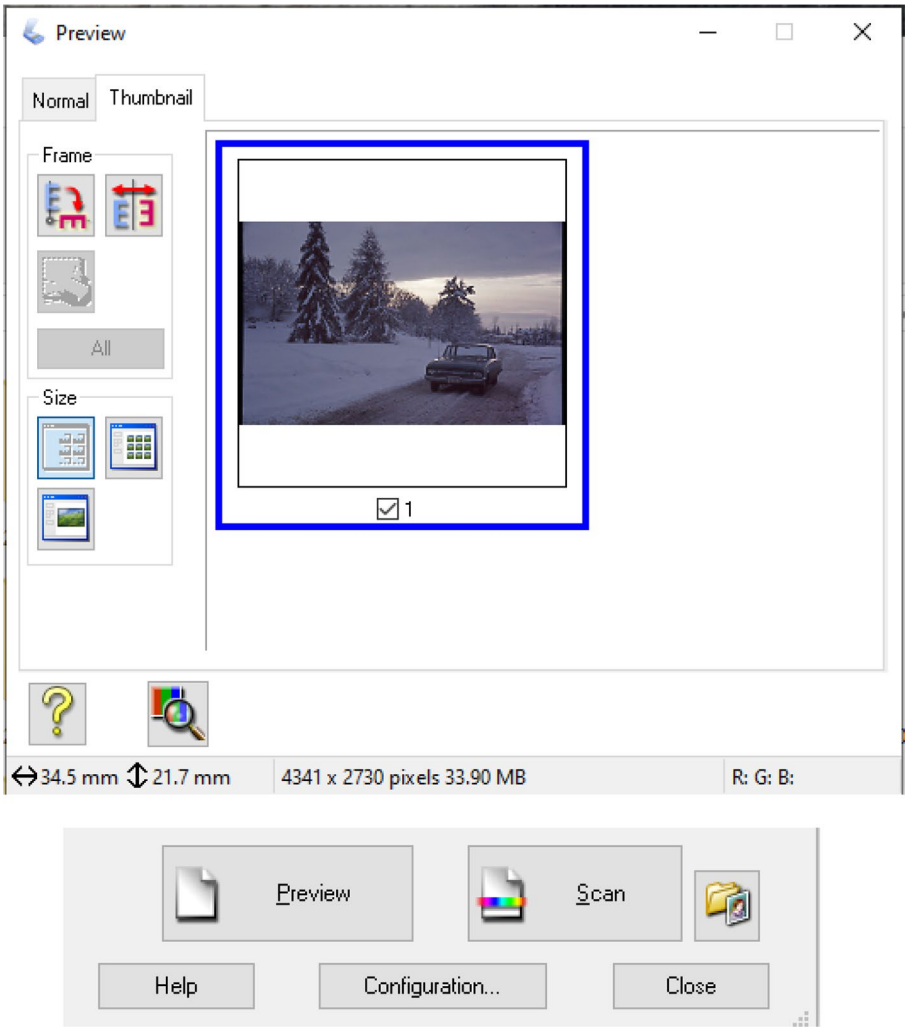

Figure 1-44. *Previewing a single slide in the scanner's Preview dialog box before scanning, then clicking the Scan button to create the image*

Note that in the case of some larger film (medium format), such as older black and white negatives, you may need to use the Normal tab setting rather than an automatic Thumbnail to acquire the correct preview of the scan. The Normal tab in this example, as shown in Figure 1-43, would allow me to marquee the custom area I want to scan, while Thumbnail might break the single negative into two or more parts, which is what I don't want. In Normal mode, I would also be able to scan several marquee photos at the same time.

So, as we can see, acquiring an image of your sketch via a flatbed scanner is very easy. You would then repeat these steps if you had any additional images to scan, and you could leave the Preview open as you work, as mentioned earlier, with the slides so that the file size and resolution are what you desire.

Remember, when you are finished with your scans, close each dialog box, clean the scanner, always put the document mat on again, and turn off your scanner.

You can then review your image in Photoshop by choosing File>Open and locating the file in your folder. Look at the color options of RGB and review the file formats you choose, in this case, a JPEG (.jpg), TIFF (.tif), or BITMAP (.bmp). This will help you get a better understanding of how your scanner works, and you can learn to make better use of the software. Refer to Figure 1-45.

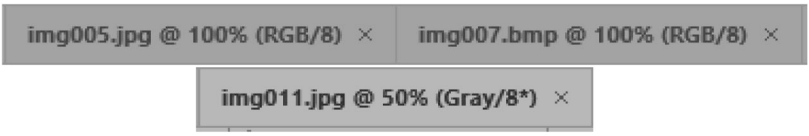

Figure 1-45. *Labels of scanned files in two formats and various color modes opened in Photoshop*

At this point, if you did make any Photoshop adjustments, which we will start to look at in Chapter 2, you may want to save (File ➤ Save [Ctrl+S or CMD+S]) your files that you scanned to your desktop, a USB flash drive stick, or external drive as a backup. Otherwise, close your scans for now (File ➤ Close).

A Digital Camera (for Large Format Files)

As mentioned before, for larger prints such as family photos or scenery that cannot fit in your scanner that you may want to incorporate into your project, you can use a digital camera. You may have to experiment with a few shots until you get the best quality. Refer to Figure 1-46.

Figure 1-46. *Capture your artwork with a digital camera*

For example, if the camera needs to be close or the surface is shiny, do not use a flash as it will cause a reflection and the image will disappear. Use a tripod to avoid shaky images even if your camera has auto stabilizer. Set up the image in a vertical or horizontal position. Also, check if your tripod has an option where the camera can point straight down on the table without tipping over when taking the picture. Refer to Figure 1-47.

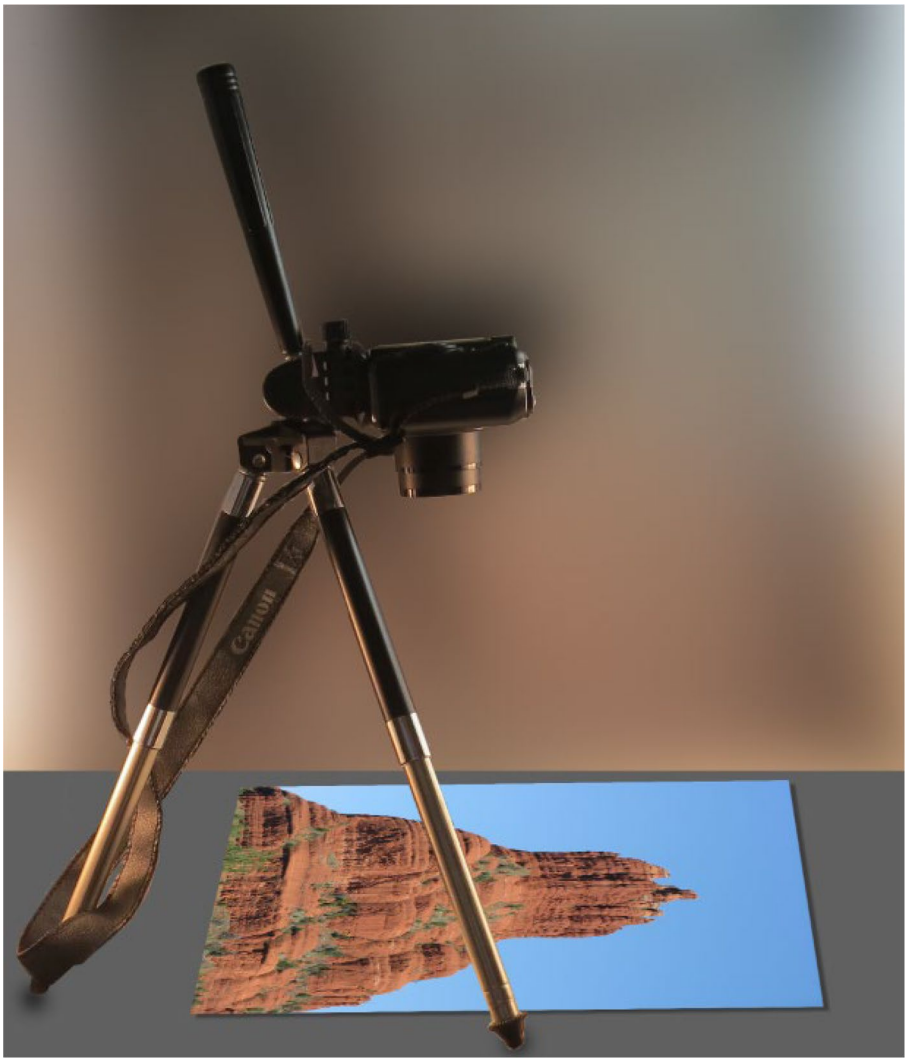

Figure 1-47. *Photo example of how you could use a tripod and a digital camera like a scanner for larger sketches*

Your camera should be at least 12 megapixels or higher. You can also experiment on a macro setting as this may produce a better-quality resolution. The image will likely be .jpg (JPEG) in RGB color mode and 8 bits. To then acquire the image, you can then use the method that Adobe describes using a USB port drive connected to the camera:

https://helpx.adobe.com/photoshop/using/acquiring-images-cameras-scanners.html

Or just take out the camera's memory card, insert it into your computer's drive, and copy the images that you want into a folder on your computer, as was mentioned with the portable flatbed scanner.

Either way, I have presented you with a variety of options for acquiring a digital image of your photos, and the choice is up to you.

If you need to refer to an example of a final scanned image in Photoshop, use File ➤ Open. If you want to practice, use the **car_image.jpg** that I scanned from a slide.

You can at this point close any files you have open in Photoshop and then exit (File>Exit) the application as well.

Summary

In this chapter, we discussed how to scan some of your photos, whether they be prints, film negatives, or slides. We looked at various scanning options, and we also looked at how to review the digital scans afterward in Photoshop. In the next chapter, you will review our tools and panels that you will find in the Photoshop workspace and begin your work on the digitized photo.