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## Scanning Old Photos

The most ideal situation would be to use a digital SLR camera, called a DSLR (35mm, with interchangeable lenses) and a copy stand. But, you can also get decent results using a tripod instead of the copy stand. It will just be a little bit less convenient.

Below, find the requirements:

- DSLR camera Choose one capable of at least 300 dpi. 600 is even better (We use a Canon 5D Mark11. It has 21.1 megapixels and produces 600 dpi.)
- Set the camera to a manual setting (Do not use Program or the green “P”.) Choose “aperture preferred” and set at f11. Set the ISO for 100.
- 50mm macro lens (This will handle most photos. If you have any that are a lot larger than 8X10, you might need a 100mm macro lens. This will give you more working distance.)
- A polarizing filter (This fits on the front of the macro lens. You want to buy a “circular” polarizer. This term does not refer to the fact that the filter is round. Rather, that it consists of a special polarizing material that compliments your digital camera. {If you were shooting film rather than digital, you’d buy a linear polarizer.})
- Place a piece of black foam core (about 8X10) at the bottom edge of the lens. This helps to reduce possible reflection.
- A right angle finder makes looking through the camera much easier, but it’s not crucial.
- Four (or two, depending on your set-up)BBA photoflood bulbs to screw into the sockets of your copy stand lighting apparatus. (You can’t simply use regular incandescent bulbs, as they are a different color temperature, and your photos would turn out a bit on the orange side. The BBA bulbs are

optimal for exactly reproducing the look of your original photograph.) The bulbs are positioned at 45 degrees to the photo you are copying. (If you are using a tripod instead of a copy stand, you'll need to get the proper sockets to hold these high wattage bulbs. They get very hot! *I have seen them before at the camera shop downtown on 2<sup>nd</sup> Ave. 452-8819. He also has cameras, lenses, polarizers, and sometimes used copy stands, etc.*)

- Overhead room lights should be off. If there is natural light coming in through a window, block that off. You don't want a mixture of different color temperatures lighting your old photo.
- A magnetic copy board, which holds your photo flat, by using the magnetic strips. (Alternatively, a sheet of plate glass could be used to hold the photo perfectly flat. Because plate glass is a greenish tint, you will need to make adjustments to the digital scan afterwards, to correct for that hue. Depending on the size of the photos you will be copying, choose 1 size larger. If you are copying wallet size photos, choose 8X10. If you are copying 8X10, choose 11X14. These 2 sizes will probably cover most photos.)
- Windex and paper towels to keep the glass smudge-free. When it eventually gets scratched, replace the glass.
- A sure method of confirming that your camera back is perfectly parallel to the photograph, is to place a small thin, flat mirror on the copy board, directly below the lens. This is to keep the paralax and is very important. Otherwise, your scan may look skewed. *See the drawing for the method of setting this up.*
- An electronic cable release (specific to your make and model of camera) If you don't want to invest in this, you could set your time delay for 2 seconds. This will keep the camera perfectly steady while you are taking the shot. But, it will be a lot less convenient and slower than using the cable release.
- Set the lens to manual focus. This is more critical than autofocus for photos which often have low contrast.

- Place the photo with the top closest to you (upside down) This will make it right side up when you look through the camera viewfinder. Put the long axis of the photo closest to you, also. (If you are working with a vertical photo, after scanning, you'll need to rotate the image. But, this will be evident.)
- Get an QpCard 101. (small, lightweight, inexpensive way to calibrate your contrast) This neutral reference card comes with a white, medium gray and black patch and is perfect for *custom white balancing*. They are available several places, but here's the link to B&H, whom I find to be very reputable. (\$17.95) [http://www.bhphotovideo.com/c/product/286667-REG/QP\\_Card\\_GQP101\\_Qp\\_Calibration\\_Card\\_101.html](http://www.bhphotovideo.com/c/product/286667-REG/QP_Card_GQP101_Qp_Calibration_Card_101.html) This card is placed at the edge of the photo you are scanning, so all 3 colors show in your original scan. It will be cropped out when you edit the photo. (Before the crop, in Photoshop, you would go to *Image/adjustments/levels*. Click on the white eyedropper tool, then click on the white patch on the QpCard 101.)
- You want to do your copying in an area not affected by vibration. (If the traffic outside your house rumbles by and causes things to shake, this will result in soft, out-of-focus scans.)
- Ideally, if using Photoshop, you will have the ability to name the scan, crop it to the edge of the photo, increase contrast (if needed) and make any other adjustments you feel are necessary. There is certainly other software that will do similar things, but in my opinion, Photoshop is the best option.
- For the best quality, save your file as a tiff. It has the largest file size. You can always make a smaller jpeg from the tiff. But, you can't ever take the smaller jpeg up in size. Since the very best quality is what the goal is, don't sacrifice the extra space on your computer by making only jpegs. Also, tiff is the standard for best longevity over time.

Minus the camera and lens, a used set-up like this one will run you about \$200.

Addendum info: Wear dark clothing, flat black paint on walls, if possible. Group photos in advance according to size.