

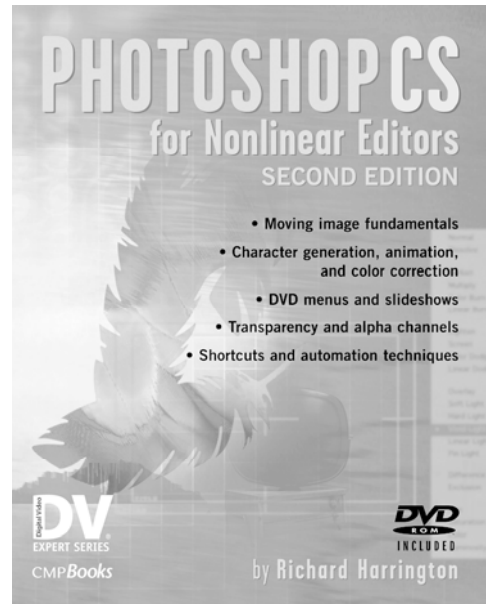
Photoshop for Documentaries:

How to Fix Historical Photos (and make them move)

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Need to incorporate photographs into your show? Want them to look great? This session is designed to help you get the most out of photographs. Learn important techniques for improving exposure and repairing physical damage. Learn timesaving techniques for color correction and styling. If you need to use photos in your next video project, this session is essential for you.



Restoration in Action

Fixing photo damage is not a step-by-step solution or recipe. Practice is the best way to become skillful, but you can expect good results if you know which tools to use. I have seen students become proficient in just a few weeks, using Photoshop's rich suite of tools. The challenge is knowing which tools to use, and when to use them.

With that in mind, I present some common scenarios and the most likely solutions. For more techniques, be sure to see Chapter 10 Repairing Damaged Photos in Photoshop CS for Nonlinear Editors.

Working with historical sources

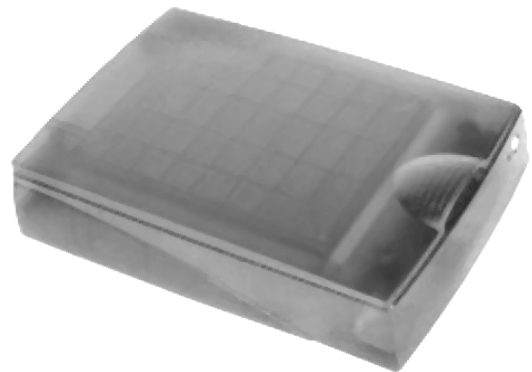
Historical or archival photos present additional problems. There is an increased likelihood for physical damage such as tearing, water damage, or adhesive stains. The photos have also faded with time and will need touch up. It will often be easier to remove color all together from a historical source and reintroduce as the final step an overlay or sepia tone.



Advice When Scanning

Before scanning an image, install the software needed by your scanner provided by the manufacturer. For a high-quality scan, you should predetermine the scanning resolution, as you want to avoid re-sampling ('upsizing') an image.

The most important thing when scanning is 'be consistent.' In a multi-user environment, this means posting the scanning guidelines on the scanner lid. A little consistency goes a long way in speeding up workflow. Some other general tips when using a flatbed scanner for best results:



1. Ensure that the scanner is lying flat, or you may get misregistered scans.
2. Use a gentle glass cleaner whenever smudges appear. Spray the cleaner on the soft cloth, and then wipe the scanner down.
3. Make sure your photos are clean before scanning. Never write on the back of photos, instead write on a post-it note and adhere to the back.
4. Place your photos on the scanner straight. Use the edges to help you maintain parallel edges on your photos.

5. If your scanner allows you, set the white and black points before scanning. Think of this as a white and black balance that you would do in a video camera. This will produce the best tonal range. You can then use Photoshop's color correction tools to adjust the white and black points as well as make additional color changes.
6. If you are scanning in previously printed items such as newspapers, magazines, books, inkjet prints, etc, you will likely get a moiré pattern. This is caused by Photoshop scanning the small spaces between the previously printed dots. Most scanners have a de-screen filter in their software. If available use it when scanning previously printed items. If this is not available, run the Median filter at a low value (Filter>Noise>Median).
7. If you are scanning three-dimensional objects place a piece of clear glass or plastic on top of your scanner's tray. You can also remove the scanner's lid and place a shadow box or black cloth on top of large objects.
8. Scan at the quality you need. For video, scan so you have approximately 4,000 by 3,000 pixels. This is generally enough pixel information so you can zoom in for corrections. This will also allow you to crop at a later time, or perform motion control in After Effects or your Non-Linear Edit System. Remember, you can go down, but you can't go up.
9. Save to uncompressed (or low compression) formats such as TIFF, PICT or TARGA for maximum compatibility and disk space usage. The PSD format is great for layered files, but is not as efficient for single layered files. Always save the appropriate file extension for your file type.
10. Routinely check your manufacturer's website for new drivers. This software improves upon how well your scanner interfaces with Photoshop. The updates are generally free.
11. If your scanner malfunctions, power down your system, and check your cable connections. When satisfied, power up the scanner first and restart your computer. If the problem is not fixed, check for new drivers.





Healing Brush

The **Healing Brush** (J) is a new tool that is designed to correct imperfections in a photo. Similar in handling to the **Clone Stamp**, it successfully hides blemishes by taking cloned pixels and matching the texture, lighting, and shading of the sampled to the original pixels. This can often generate results in which the repaired pixels blend seamlessly together.

To get better results on an area with strong contrast, make a selection before using the **Healing Brush** Tool. The selection should be bigger than the area to be healed and should follow the boundary of high contrast pixels. For example, if healing a person's face, make a selection over the problem area that excludes the adjacent sky or clothing. This way, when painting with the **Healing Brush**, the selection will prevent color bleed-in from outside areas.

Step 1 Select the **Healing Brush** Tool by pressing J. (It's the one with a **Bandage** icon.)

Step 2 Select a brush from the **Options** bar or **Brush** palette.

Step 3 Choose a blending mode. (This can be useful when retouching as to avoid visible cloning.) The Replace option preserves noise and texture at the stroke's edges.

Step 4 Choose a source for repairing pixels in the **Options** bar. The standard source is sampled. Here pixels are taken from the area surrounding your sample point. As the brush moves, the sample point also moves accordingly to ensure variety in the sampled source. The Pattern option uses a pattern from the current pattern library (accessible from a pop-up list).

Step 5 Specify the alignment. If Aligned is selected, the sample point and painting point move parallel as you move. If the user clicks and starts over, the sample point picks up where it last was. If Aligned is deselected, the initial sample point is used (even after you stop and resume cloning). The second method ensures that you are always sampling from the same area.





Try to “follow the line” for better results. Use a small brush and short strokes with the Healing Brush for best results. The Smudge Tool set to Lighten or Darken mode is also useful for minor blemishes

Step 6 You can clone from all visible layers by specifying Use All Layers. If this is deselected, only the active layer is used.

Step 7 If you are using the Sampling mode, Option+click (Alt+click) within the current document or another open document set to the same color mode.

Step 8 Click and start to paint as if you were using a brush. Because the sampled pixels are drawn from before you click, it may be necessary to release and start over occasionally to avoid cloning the problem area.



Step 9 Release the mouse to merge the sampled pixels. The stroke will look strange until then.

Step 10 Try to “follow the line” by looking for edges to follow. Straight lines such as creases in clothing are easier to follow than random spots. Look to follow the natural creases and linear paths that are present.

Alignment

The world is not flat, and sometimes it shows. Thin, crooked lines look very bad in video. If a photo is not straight (because it was shot or scanned at a slight angle), it is easy to fix.

Step 1 Access the **Measure Tool (I)** and find a surface you think should be horizontal (or vertical).

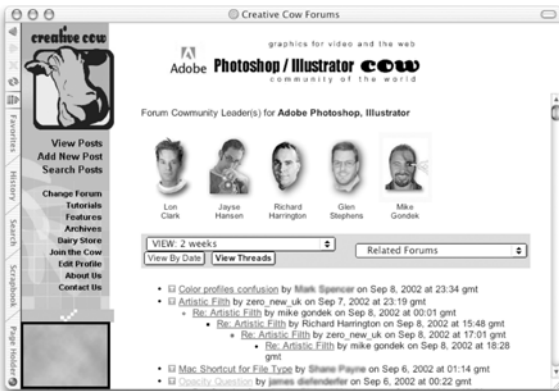


Step 2 Click and drag a line to measure the angle.



Step 3 Select **Image>Rotate Canvas>Arbitrary**. The correct value is inserted automatically from the **Measure Tool**.

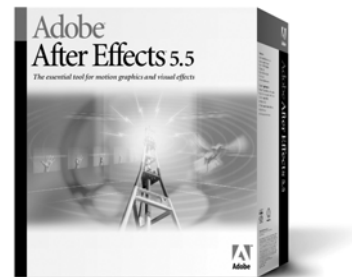
Step 4 Crop the image or patch the gaps and make any additional repairs.



Want to keep in touch?

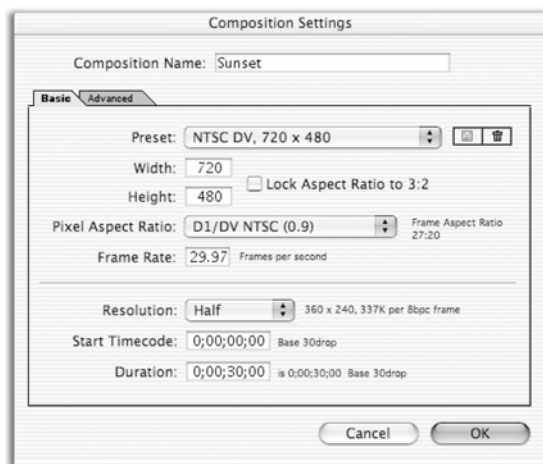
The Creative Cow website (<http://www.creativecow.net>) offers several free forums and tutorials. With a distinct slant towards video professionals, the Photoshop/Illustrator forum offers a great place to look for ideas or troubleshooting advice.

Professional Motion Control “Photography” with After Effects and Photoshop



Documentary-style motion control photography is becoming increasingly popular for use in all styles of video production. Why just show the pictures, static and full-screen? Most editors have traditionally had two options.

The first is setting up a camera and card stand, and then shooting the photos with a digital video camera. This method is prone to keystoneing (due to the tilting to avoid light reflections) and does not allow for photo restoration or precise movement. The second method involved importing the photos into the edit system and enlarging (zooming) them. This method produced softening and had very limited results. Many plug-ins have recently been developed that work within edit systems that improve upon this technique, but there is still a better way.



After Effects provides convenient presets for choosing the right composition settings. After Effects will set everything except for the duration. That’s up to you.

additional movement. The goal is to have extra pixels when you shrink the image. In other words, you scale the image down to zoom out and restore it to 100% to zoom in.

By combining Photoshop with Adobe After Effects, extremely high-quality motion control is possible. In fact, I have produced results that out-perform those done on expensive motion control rigs. Everyone knows that Photoshop is the perfect tool for restoring damaged photos (see Chapter 9 of *Photoshop for Nonlinear Editors*, “Repairing Damaged Photos”). When combined with Adobe After Effects, complex motion is possible.

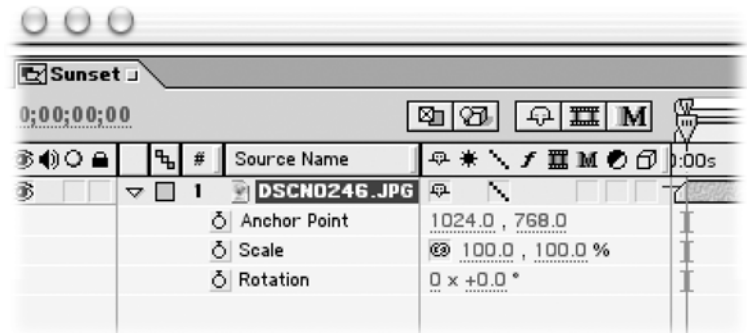
Step 1 Scan and prep all of your photos in Photoshop. If you want to do a zoom or a pan, you will need extra pixels. For example, an image that is 2160 pixels wide will allow you to perform a three-screen pan. Do not worry about cropping or sizing for the screen, but make sure that you have enough pixels for

Step 2 Import your photos into After Effects. You can drag an entire folder in (provided there are no nested folders within it). Select the folder, hold down the Option (Alt) key and drag it into the project window. If you need to rename the folder, select it and press the Return (Enter) key.



Step 3 Create a new composition and size it for your edit system. If you are unsure, check the owner's manual for your NLE or export a video clip from the NLE and import it to After Effects to check size. Set the duration to match your needs, plus add a little pad. After Effects will correctly interpret your Photoshop files as square pixels, unless you've sized them to a standard video size such as 720 X 480.

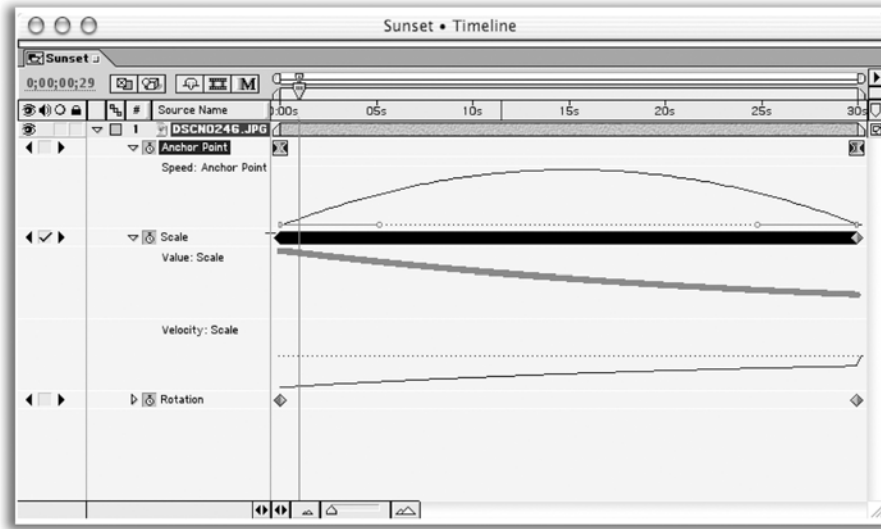
Step 4 Drop in a photo. Highlight the layer, and press S to call up the Scale properties. Now hold down the Shift key and press A for anchor point and R for Rotation. The anchor point is where the "camera" is pointing, and is a much better option than using Position. Using an anchor point is like moving the camera; using Position is like locking the camera down and moving the picture instead. This is one of two key differences between building your motion control (MOCO) in After Effects instead of another system. If you want to drag in a visual interface, double-click on the layer to launch footage view. From the submenu, you can choose Anchor Point Path; this will show you the camera path. This path can be dragged to set the viewing position, and will give you a visual map of the motion that will be taken.



Step 5 Add key frames for the initial position of the photo. Jump to the outpoint of the layer by pressing the letter O (for Out). Add your end key frames.

Step 6 If you will want to simulate a zoom, press S for Scale to access the scaling controls. Do not enlarge your image beyond 100% for best results. You can also add Rotation keyframes (R), if that is desired.

Step 7 (Optional) Use your animation assistants to add Ease on the rotation and anchor point key frames. If you own the production bundle, click on the word Scale to highlight both keyframes. From under the keyframe assistants, choose Exponential Scale. This powerful assistant will accurately simulate the speed of a camera zoom.



By using Exponential Scale (Pro Version only) and Ease, realistic camera moves can be achieved.

Step 8 Double check that your quality switches are all set to Best and add your comp to the render queue. If you want, you can specify Best inside of the render queue, but I personally always switch it in the timeline to be certain. Render out to the specifications of your edit system by matching output size and codec (compressor-decompressor). For best results, choose to field render.

This is just a microscopic amount of the possibilities that exist for combining Photoshop and After Effects. Don't worry, After Effects is a very deep program, but getting into it is easy for Photoshop users because the interfaces are very similar.



Instructor: Richard Harrington

Richard Harrington is a certified Project Management Professional, Adobe Certified Expert in Photoshop and After Effects, and Apple-certified instructor in Final Cut Pro. Additionally, he has completed Avid's Master Editor Workshop and the Avid Certified Instructor Program.

His visual communications consultancy, RHED Pixel, creates motion graphics and produces video and multimedia projects. He is a faculty member at The Art Institute of Washington, a popular speaker at conferences, and an instructor for Future Media Concepts.

Richard is the author of *Photoshop for Nonlinear Editors*, and co-author of *Final Cut Pro 4 On the Spot* and *After Effects On the Spot*. He has also released "Photoshop CS: Essentials for Digital Video," a seven-plus hour DVD from www.VASST.com. If you have more Photoshop questions, Richard is a moderator of Creative Cow's Photoshop Forum.

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