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for Nonlinear Editors

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by **Richard Harrington**

PHOTOSHOP CS for NONLINEAR EDITORS

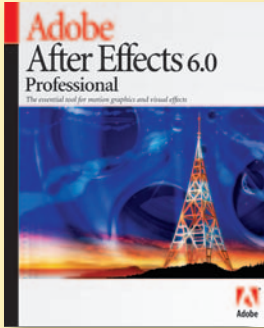
Richard Harrington

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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 three options.



The first method involves sending the images to a motion control camera operator. This is an expensive process and must be adequately budgeted for both time and money. The second method involves setting up a camera and card stand and then shooting the photos with a digital video camera. This method is prone to keystone (due to the tilting to avoid light reflections) and does not allow for photo restoration or precise movement. The third method involves importing the photos into the editing system and enlarging (zooming) them. This method produces softening and had very limited results. Many plug-ins have recently been developed that work within editing systems that improve upon this technique, but there is still a better way.

By combining Photoshop with After Effects, extremely high-quality motion control is possible. In fact, I have produced results that outperform those done on expensive motion control rigs. Everyone knows that Photoshop is the perfect tool for restoring damaged photos (see

Chapter 10, “Repairing Damaged Photos”). When combined with After Effects, complex motion is possible.

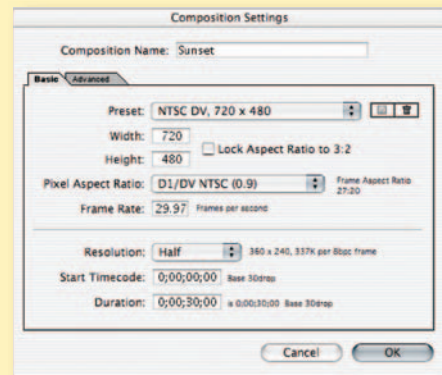
I’ve included a project in this chapter’s folder that contains a few motion control examples. You will find a movie on the disc as well that demonstrates this technique.

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 pan across three screens. Do not worry about cropping or sizing for the screen, but make sure that you have enough pixels for 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 (or see more of the viewable area) and restore it to 100 percent to zoom in. DO NOT change the pixel aspect ratio in Photoshop; allow After Effects to compensate for square pixels.

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 editing 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 720 480.

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



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.



Animate the anchor point, not Position. This produces a truer camera move.

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. 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 percent for best results. You can also add Rotation keyframes (R), if that is desired.

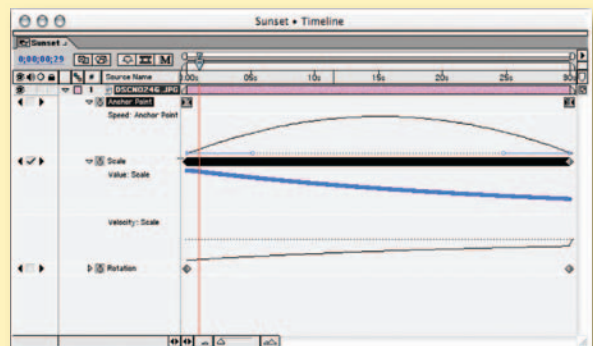
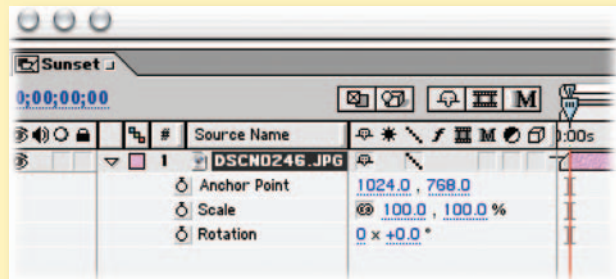
Step 7 (Optional) Use your animation assistants to add Ease on the rotation and anchor point key frames. If you own the production bundle, click on the word Scale to highlight both key frames. From under the key frame assistants, choose Exponential Scale. This powerful assistant will accurately simulate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

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 editing 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.



"Perfect" motion control is possible by combining Photoshop and After Effects. In fact, result can far exceed what is possible with an expensive MOCO rig.



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

Video Type Details

Help, I Have Diffikultie Speling

This may sound obvious, but the best way to avoid mistakes is to copy and paste from the script. Ask your client or producer to provide you a .txt or .rtf file, and open it with your computer's text editor. You can now copy and paste titles directly. While this is not a foolproof solution, it does make it easy to figure out where the error occurred (and it usually will not be with you).

Spell-Checker

Photoshop has become a freestanding graphic creation tool. It is now possible to proof your text in a number of different languages. If you are familiar with a word processor's spell-checker, Photoshop's will seem completely standard. Remember, you must set the language for a text field by using the dropdown menu in the Character palette. To launch the spell-checker, choose it from the Edit menu (Edit>Check Spelling). If it flags a word that you know is right, you can choose to ignore it or add it to your dictionary. There's no earth-shattering technology here, but the cries of web and video designers have been answered.

Related to the spell-checker is the Find and Replace command. This allows you to go through all of your text layers and swap out words. Say that you've listed Williamstown Resort throughout your full screen graphics. A few days later, the client calls and says it's actually Williamsburg Resort. You can have Photoshop scan through and replace all instances of the improper name throughout your composition. Again, the technology is standard, but it can be a time saver.



Spell-check? You bet! Version 7 added a spell-check feature to the Edit menu.

Safe Title Area

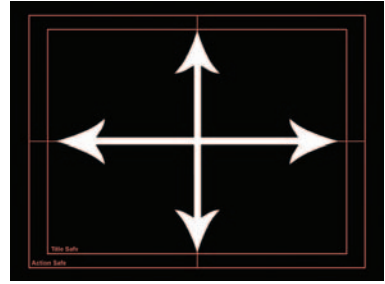
If you put a computer screen next to a television screen, one distinction should stand out. Computer monitors have black borders around the viewable areas, while televisions provide edge-to-edge viewing. On any given television set, up to 10 percent of the viewable signal is lost because the tube is recessed into a case. The viewable area is called the action safe area.

We must move all text elements in an additional 10 percent (a total of 20 percent from the edge.) By placing text within the safe title area, we ensure that it is readable. If you are using Photoshop CS, then you have new safe title area templates built into the application. If you are using an earlier version of Photoshop, or would like to make your guides a little more robust, you'll want to manually create a safe title area overlay.

Several alternatives to creating a safe title area were discussed in Chapter 2, "Pixels: Time for Tech." Here is one additional method using

Photoshop's built-in features: create an action for this item so that you can recall it for later use. There are several steps involved, so if you have a good template, use that. I'm reviewing this so that if you are ever in a jam, you can build your own safe area overlay document. We are going to build a safe title document for a D1 system, sized 720 486.

- Step 1** Create a new document, and pick the NTSC D1 720 486 preset from the dropdown menu. Set the document to RGB mode. By default, Photoshop CS will add guides for the safe title area. Let's make these a little more robust with an actual overlay.
- Step 2** Choose Select All by pressing Cmd+A (Ctrl+A). Then, choose Edit>Fill and fill with black.
- Step 3** Create a new (empty) layer, and then name it Safe Area Overlay. You should still have an active selection.
- Step 4** Scale the active selection to 90 percent by choosing Select>Transform Selection, and then typing in 90 percent in the Options bar for width and height. Press Return (Enter).
- Step 5** Load a red swatch as the foreground color. Then choose Edit>Stroke and specify four pixels centered. This is the action safe area.
- Step 6** Choose Select All by pressing Cmd+A (Ctrl+A), and scale the active selection to 80 percent by choosing Select>Transform Selection.
- Step 7** Type in 80 percent in the Options bar for width and height. Press Return (Enter).
- Step 8** Choose Edit>Stroke and specify four pixels centered. This is the Safe Title Area.
- Step 9** Lock the Safe Area Overlay layer by clicking on the Lock icon in the layer's palette.
- Step 10** Save your work.



All type must fall within the inside box (safe title area) for traditional video. This region is approximately 80 percent of the full screen size. (Original template from Tools for Television.)



Even though the first image looks too loose, you must still follow the safe title area. When the video is viewed on a television, the outermost edges are lost.



An Adobe Illustrator or Vector EPS file is the best format to get a logo in.



Keep it legal (the other way).

Often a scanned logo will have its legal symbol become illegible.

You may choose to insert these special characters using the Key Caps on a Mac or the Character Map on a PC. The following keyboard shortcuts are also available on a Mac:

- ™ (Option+2)
- © (Option+G)
- ® (Option+R)



Engaging lower thirds Looking to make your lower-thirds more stunning? Be sure to try adding

texture to a bar. There are several texture images on the DVD, you can also use slightly out of focus images to achieve a nice effect.



Logo Standards

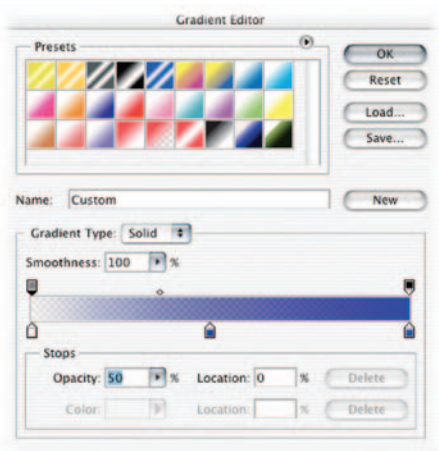
Despite your personal experience, logo standards do not exist to make your life difficult. A company places a lot on that little piece of art. A logo helps a company stand out; it stands for quality and uniqueness. For large companies, a fortune is invested in developing that logo and promoting it to the world. Companies want to have that logo and brand identity moving in the same direction.

Of course, problems do arise. Logos may contain serifs or fine design elements that don't hold up at low resolutions. Often arguments will pop up in the edit suite about drop shadows or glows. Other times it will be over the need to keep the ®, ©, or ™ symbols, which turn to little blobs on the television monitor. A great place to start is the company's web site. Look at how the logo has been simplified to work on the "little" screen. You'll find that several of your battles will have already been decided. Every company that takes its brand seriously will have a style guide. Here you will find precise details on fonts, colors, size, and placement. You must get a copy of this. Ask your clients. If they are unsure, start making phone calls. Try the in-house graphics department, the marketing group, the creative department, or the company's ad agency. If the group is small, you might even ask who created the logo and follow up with the designer.

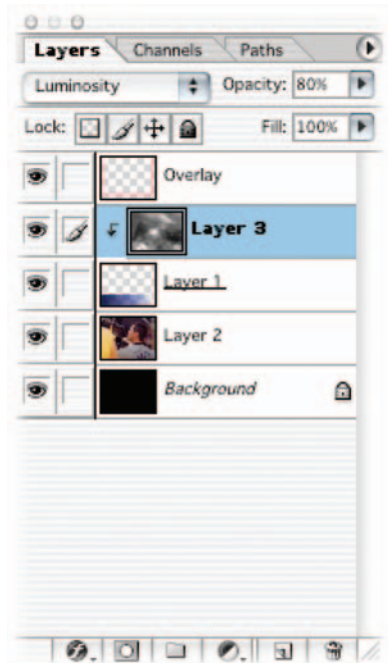
Creating Lower Thirds

Most video editors choose to build their title graphics (or lower thirds) within the title tool of their nonlinear editing system. These built-in character generators are very limited and do not give the precise control over text and graphical elements that Photoshop provides. I recommend that you use Photoshop as a supporting player, or let it assume the role of character generator entirely. As a supporting player, Photoshop is quite effective at making complex gradients for use in bars. Let's create a lower-third bar from scratch.

- Step 1** Open a safe title document. Use the one created earlier in this chapter, Photoshop's built-in template, or try out the Tools for Television Safe Grid Action found on the DVD.
- Step 2** Grab the corner and expand the document so that you can see some of the empty space around the canvas. It is a good idea to place a photo or freeze frame in the background for reference purposes.
- Step 3** With the Rectangular Marquee tool, draw a box across the lower fifth (you thought I'd say lower third?) of the screen. You

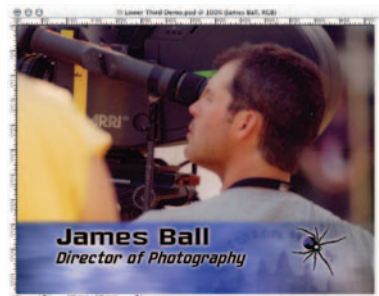


Photoshop's Gradient Editor outperforms all other gradient tools (even those in other Adobe applications). Choose from complex shapes, multiple color or hues, and advanced blending options for superior results.



may choose to have the box extend to the bottom or have it stop around the action safe area.

- Step 4** Select the Gradient tool. Click on the gradient in the Options bar to edit the gradient to your choice. You may load gradients from the submenu or create your own from scratch. You may want to adjust the opacity stops for a ramp effect.
- Step 5** Draw the gradient within the selection. Experiment with different gradient shapes, as well as point of origin and length of gradient.
- Step 6** Deselect the gradient, and apply a Gaussian blur filter on the layer to soften the edge.
- Step 7** If you'd like to introduce some texture, place a grayscale photo or pattern directly above the layer and group it with the bar with the Create Clipping Mask Command, **Cmd+G** (**Ctrl+G**). You may also choose to adjust the blend mode (luminosity works well) and the opacity to achieve the desired effect.
- Step 8** Add the logo. If the file is an Adobe Illustrator file, choose **Place** from the **File** menu. Otherwise, you can open the document, and copy and paste the logo. Or better yet, just drag it in with the **Move** tool (**V**). You may want to use layer styles, such as a drop shadow or glow to offset the logo from the bar. See Chapter 6: **Bugs, Bevels, Glows, and More** for more details on layer styles.
- Step 9** Draw the text block for the name, I recommend using **Paragraph** text so you have better control over the characters.



Step 10 Duplicate the text layer, shift it down, and modify the text and font. Choose a smaller point size and different font or style for the title, which is generally longer than the name.

Step 11 Apply a contrasting edge effect such as a glow, drop shadow, or stroke.

Step 12 Link the two text fields together and choose new set from the submenu of the layer's palette. You can now duplicate this set by choosing Duplicate Layer Set from the Layer menu (or drag its layer onto the Layer Set icon in the layer's palette) as many times as needed. Turn off the Visibility icons and work with one copy at a time for each title.

Targeted Flattening Revisited

When you are ready to save for your NLE, you must save the composition out as a flattened file (generally PICT or TARGA) with an alpha channel. There are several approaches to flattening a file. Targeted flattening, introduced in Chapter 3, is one technique that works well.

Step 1 Turn off all elements you do not want flattened (including the background or placement image). Create a new (empty layer) and highlight it.

Step 2 While holding down the Option (Alt) key, choose Merge Visible. All layers are now flattened to a single layer.

Step 3 Turn this layer off by clicking on the layer's Eye icon.

Step 4 Hold down the Cmd (Ctrl) key and click on the layer name in the layer's palette. The marching ants should encircle the layer.

Step 5 Switch to the Channels palette and click on the Save Selection as Channel button. Choose Save As from the file menu and Save A Copy as a PICT or TARGA with an alpha channel included.

Step 6 If you have multiple titles, discard the alpha channel (NLEs get confused if there are multiple alpha channels) and repeat for each lower third.

While this process may seem time consuming, you'll become quick at it with a little practice. The quality you can achieve is superior to any standalone character generator or built-in title tool. The time savings really add up for multiple titles. Remember to always save a layered file so that you can make changes.



Title Tools vs. Photoshop.

There are still a few reasons to use the title tool that came with

your editing application:

- Rolls
- Crawls
- Animated Character Effects
- Embedding titles in Sequence file

Photoshop, however, has its own benefits that push it over for standard titles and lower-thirds work:

- Layer Styles
- Speed
- Spell-checker
- Advanced Character Control
- Advanced Paragraph Control
- Texture Mapping and Fill Effects



Chapter 9

Color Correction: How to Get It Right

How often do you need to color-correct your video? Chances are, every edit session. The same issues that plague video also affect still photography (especially digital photography). The bad news: you won't find a waveform monitor inside Photoshop. The good news is that all of your knowledge about fixing video signals will translate to Photoshop (with a little practice).

When working in Photoshop, the most common type of color correction you will need to perform is scene-to-scene correction. That is to say, you will need to bring a variety of shots, from a variety of sources, closer together. They will need to seem as if the same photographer shot them under similar lighting conditions. This is an extremely challenging task if you consider the likelihood that you will pull images from several different stock libraries, client-provided sources, and video frame grabs.

The key when starting out is to work on a copy of the image. This way you always have a copy to return to if something goes wrong. Open the image in question, then choose File>Save As, and give the corrected version a new name. In fact, this is always a good idea. Image correction is often destructive editing, meaning that you cannot revert to the original state at a later date. Once the modified file is closed and saved, you lose the ability for multiple undos. Preserving an original version or employing adjustment layers make nondestructive editing possible.

How to Spot a Problem

Color correction, like editing, is a never-ending process. It's finished when the budget runs out, all the time is used up, or the client is satisfied. The end product could always be better if you only had more time/money/processing power. So understand that it is important to be able to spot problems quickly. What sort of problems? There are several.



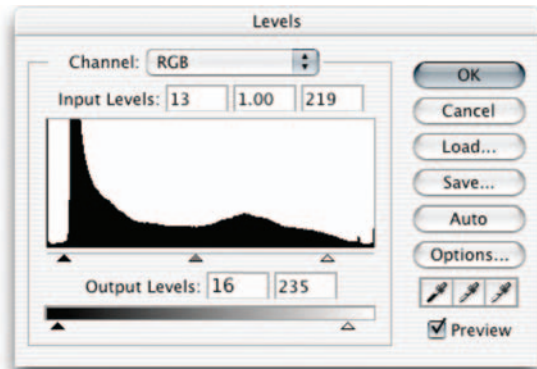
The five most useful image adjustments for video:

1. Levels
2. Curves
3. Hue/Saturation
4. Color Balance
5. Desaturate

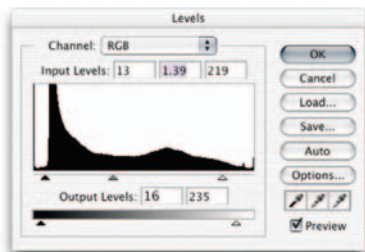
Levels

There's a very good reason this image adjustment comes first in the menu. You will need to make a Levels adjustment on every image. The Levels command allows you to correct tonal ranges and color-balance issues. That is, you can fix poor exposure and adjust your white and black points. If you understand the need to white balance a video camera, the Levels command will soon make sense.

The key to understanding the Levels adjustment is the histogram. If you can learn to read this graph, it can serve as a visual guide for adjusting the image. To illustrate this powerful command, open up



The midtones are way too dark in this image. (Photo by James Ball)



Adjust the midpoint to lighten the image.



Adjust the levels for the red channel separately to improve color balance. (Photo by James Ball)

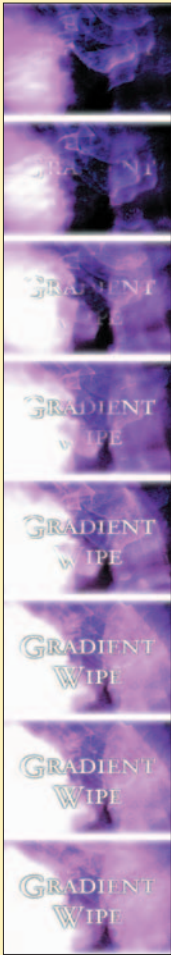
the file CH09ImageAdjust1.tif. Launch the Levels dialog by choosing Image>Adjust>Levels or by pressing Cmd+L (Ctrl+L). Be sure the Preview box is checked so that you can see your changes update.

By adjusting the black and white input sliders, you can set the black and white points. Move each outside slider to the first group of pixels on each end. This will map the pixels to the values set for black and white in the Output levels area. The pixels that fall in between are adjusted proportionally in order to maintain a proper color balance. For this photo, I've adjusted the Input and Output levels to restore some of the missing contrast in the image. While a separate command exists for brightness and contrast, the Levels adjustment lets you perform several improvements with one adjustment, thus cutting down on quantization (loss of quality) introduced from multiple image processing steps.

The true power lies in the middle slider. Here you can modify the gamma setting. In effect, you can use the middle Input slider to change the intensity of the midtones, without making dramatic changes to the highlights and shadows. In a sense, you can better expose the picture, adding or subtracting light from the midtones. This adjustment is critical to creating a continuous flow between images. Levels adjustments do not offer as many precise adjustment points as Curves adjustments, but they are significantly easier to perform, and they generally create very good results.

So far you have been making Levels adjustments across all channels evenly. You can choose to isolate your corrections to a specific channel by clicking on the dropdown list. This can be used to remove colorcast

The Most Versatile Effect: Gradient Wipe



I couldn't discuss gradients without talking about the incredible Gradient Wipe. Adobe After Effects can use any gradient layer as a "transition map." Create or modify a gradient in Photoshop first. You can combine gradient layers, blending modes, and filters to create an interesting map.

Step 1 Import the gradient into After Effects.

Step 2 Add the gradient to your timeline but leave its visibility off. Make sure the gradient layer is the length of your composition.

Step 3 Apply the Gradient Wipe (Effect>Transition>Gradient Wipe) to the intended layer.

Step 4 Define the Gradient Layer source.

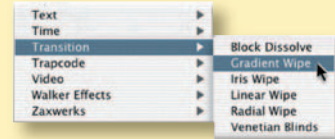
Step 5 Turn up the Transition's softness for a smoother transition.

Step 6 Start the transition 100 percent complete, and then set a second keyframe to 0 percent where you want the transition to end.

Not an AE user (yet)? Apple Final Cut Pro and Sony Vegas has the same effect, conveniently called Gradient Wipe. Other NLE users can look for the Spice Master AVX from Pixelan software (www.pixelan.com).



A sample project is provided on the DVD.



A linear gradient blends with the Clouds and Glitterato filters.

