

adobe after effects

Imagine taking Adobe's superb render engine at the heart of Photoshop and setting it to a timeline not unlike an Avid or Final Cut Pro editor. Every Photoshop parameter that is numerically definable is now also key-frame enabled. The result is the ability to animate composites of two dimensional layers with full channel operation functionality, in a Z plane ... over time. Using bézier curves not just for shaping objects, but for elegantly describing intricate velocities and trajectories, amongst other complex characteristics, for highly polished results.

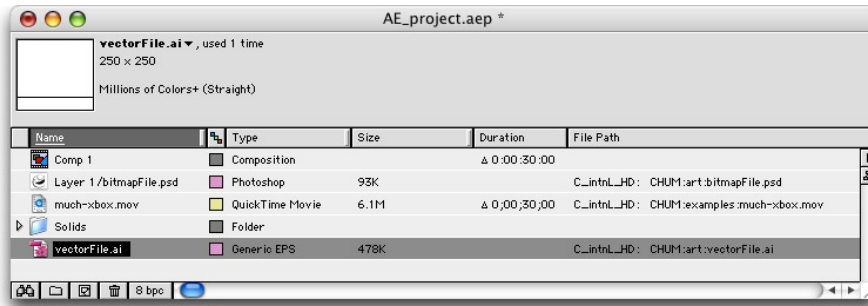
training.

For the staff of CHUM Television,
a recap of the after effects interface,
from March 6th and 7th, 2006.



03-01 start with the project window

The starting point for all After Effects projects is the *project window*. For those coming from an Avid background, think of this window as you would a series of nested bins. All your assets; video, vectors, bitmaps, audio and compositions are kept in this one window. The project windows features reflect its function, like a mini file system, you can nest folders within folders, and rename and reposition items at will. With an eye towards entropy, keep this window well organized.



03-02 import footage [a.k.a. assets/source files]

The term *footage*, is what Adobe chose to call assets intended for After Effects. Just as one captures video prior to editing, the very first step in an After Effects project is to import footage, the source files to be used in the composition. After Effects accepts most file formats for bitmaps, vectors, video and audio. To import footage:

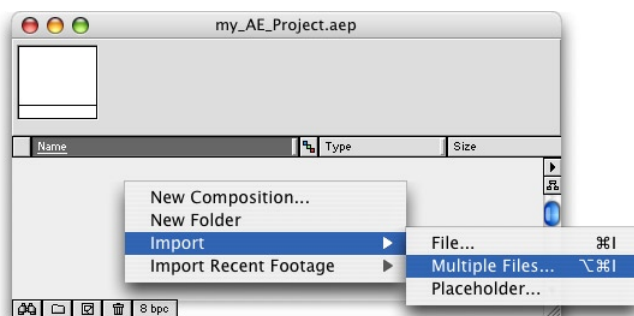
03-02-01] Choose: File > Import > File... or

03-02-02] type: comnd+i or

03-02-03] Choose: File > Import > Multiple Files... or

03-02-04] type: optn+comnd+i or

03-02-05] right click inside the project window to reveal a contextual pull-down, from which you may do any of the above as well as create a new project or folder [bin].



You will then be presented with a file navigation dialogue, from here locate the asset, select it, then choose *Open*, or simply double click it. If you're using the multiple import you will have the added step of choosing *Done* before you'll be returned to the project window.

03-03 interpret the footage

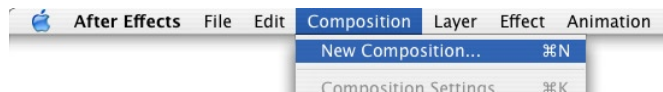
When you import a footage file containing an alpha channel, After Effects determines if it is straight or premultiplied.



If the alpha channel is unlabeled, After Effects displays the Interpret Footage dialog box and prompts you to select Ignore, Straight, Premultiplied, or Guess. When you select Guess, After Effects determines the interpretation method. Use the Guess option if you are unsure. Choose the Ignore option if you don't want to use the alpha channel at all.

03-04 create a composition

After importing your assets you need to have some place in order to compose your animation, that place is called the *composition*. To create a composition:



03-04-01] Choose: Composition > New Composition... or

03-04-02] type: comnd+n or

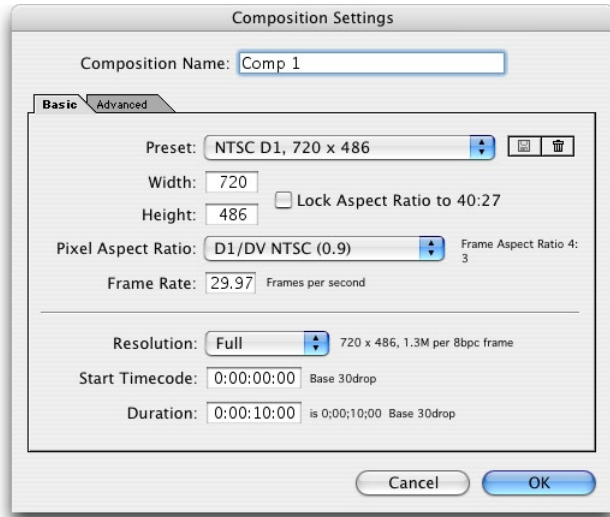


Create a new Composition.

03-04-03] Click: the "Create a new Composition" button at the bottom of the project window.

03-05 composition settings

Before giving you the new composition, After Effects presents you with the Composition Settings dialogue. This is where you establish the dimensions, aspect ratio of both frame and pixel, as well as frame rate and 3D render engine.



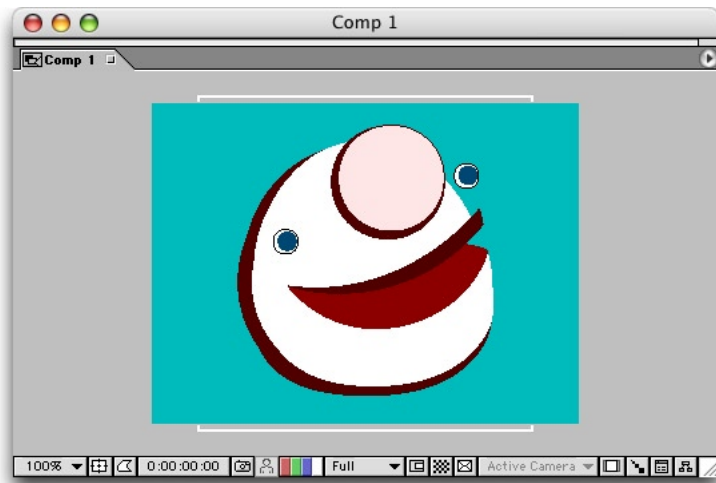
You can access the **Composition Settings** dialogue at any time, even after the settings have been established, by:

03-05-01] Choosing: Composition > Composition Settings...

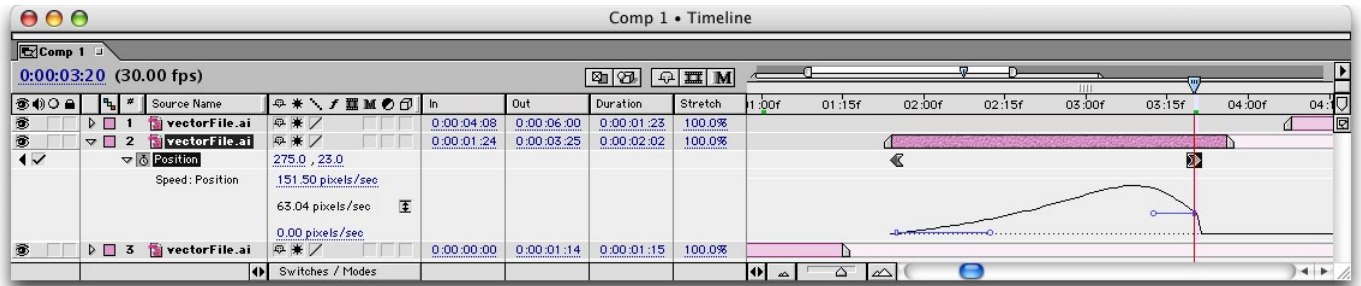
or

03-05-02] type: comnd+k

03-06 the composition

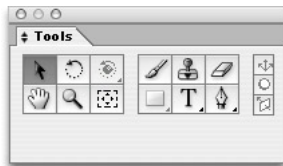


Primary control over the composition is attained through two windows, the **composition window** and the **timeline window**. The first of these two, the **composition window**, displays both a rendering of the current frame as well as the surrounding paste board for object envelope reference.

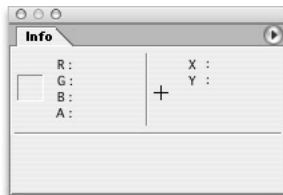


The second window to open, after requesting a new or pre-existing composition, is the *time-line*. This window provides all the functionality of a timeline from the *Avid* or *FinalCut* interface combined with the *Layers* pallet from the *Photoshop* interface. Through the use of twirl-down triangles to reveal collapsible subsections, complex characteristics data is described right on the timeline as a hybrid of bézier curve and numeric information.

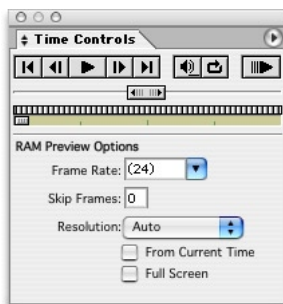
03-07 keep these 3 palettes open too



The *tools pallet* functions the same as it does across the *Adobe Creative Suite*. My experience is that while in *After Effects*, I'll make far fewer swaps of my cursor tools than say, while in *Illustrator* or *Photoshop*. However, this is still a primary tool repository and, especially while editing your masks [travelling matts], you'll want to afford it the screen real estate.



The *information pallet*, like the tools pallet before it acts as it does across *Adobe CS*. You will find it to be a critical reference, however for reference only, as it is not interactive.



The *timeline controls* act much the same as they would on a DVD deck, with a number of added render related functions. Since constant playback of either a few consecutive frames or whole sections of footage are required to get a feel for the effectiveness of your edits, I recommend that this pallet gets permanent screen time as well.

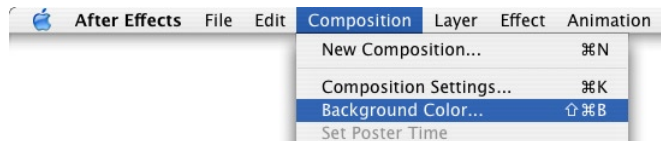
03-08 background colour

The default background colour of your composition is black. It is very important to understand that a composition's background colour is of no consequence to the final animation unless it is the last composition in your project before the render. In other words, if you set the background colour to green and then render it while nested in a composition with a background colour of red, the animation will have red and not green in the background.

This is of even greater importance if you try to rely on the background colour as a function of the result of your foreground imagery; it isn't going to happen. Let's say you wish to perform a channel operation and your intended results require a specific background colour to act upon the foreground. You must insert a solid [a coloured rectangle] of the required background colour below your foreground on the timeline. Otherwise your outcome will be as though the pixel values of the background were zero, regardless the actual colour.

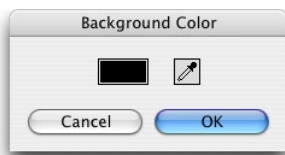
At first this appears to be a lot of extra work for nothing. However, this method avoids rendering madness that would otherwise ensue. After Effects automatically generates a full bit-depth and animated alpha channel of your composites, on the fly. This is a powerful feature, central to the nesting composition function of After Effects. If the background colour were given numerical value, it would counteract the quality of the composition's alpha channel, or at the very least, dramatically increase the complexity of the render order where nested compositions and channel operations are concerned.

Choose your background colour in order to aid you in making your edits. Only when it comes time to render should your focus be on a background colour as the actual colour of the background. To set the background colour of a composition:



03-04-01] Choose: Composition > Background Colour... or

03-04-02] type: shift+comnd+b



You will be presented with the Background Colour dialogue. Use the available eye dropper to select a colour from your composition or the interface. You may also click on the swatch to access system level colour pickers, for numerical [read: reproducible] accuracy.

03-09 timeline switches explained

03-09-01] **video**. I guess **video** is a good name if you're coming from an online mixer background, this could be thought of as a video switcher. I would have called it visibility. It toggles the layers visibility on and off for the composition.

03-09-02] **audio**. You guessed it, same as above only with audio ... sound.

03-09-03] **solo**. Think audio mixing board, only it's for what ever media the layer contains. This switch toggles all other channels / layers off and on again.

03-09-04] **lock**. With this switch on, non of the layer's characteristics may be altered.

03-09-05] **shy**. This is the opposite of **video**. You can still see the layers contents in the composition, but any reference to it in the timeline is hidden. This is an interface-clutter management tool.

03-09-06] **continuously-rasterize**. Turn to page08 for a full explanation.

03-09-07] **quality**. Turn to page08 for a full explanation.

03-09-08] **effect**. Toggles the layers effects on and off.

03-09-09] **frame-blend**. Interpolates frames in pre-rendered or captured video that does not adhere to the compositions frame rate. A still frame from **frame-blended** footage will look like a cross-dissolve between its adjacent frames, however, during playback it will achieve a much less jerky motion than that of out-of-synch-footage that hasn't been **frame-blended**.

03-09-10] **motion-blur**. A dynamic blur effect that calculates both trajectory and velocity per pixel, to produce a believable simulation of cinematic shutter duration.

03-09-11] **adjustment layer**. Effects on this layer are applied to layers below it. Identical to **Photoshop adjustment layers** with the addition of key-frame enabled animation.

03-09-12] **3D layer**. Adds the Z plane to all spatial parameters, allowing the layer to be animated in three dimensions.

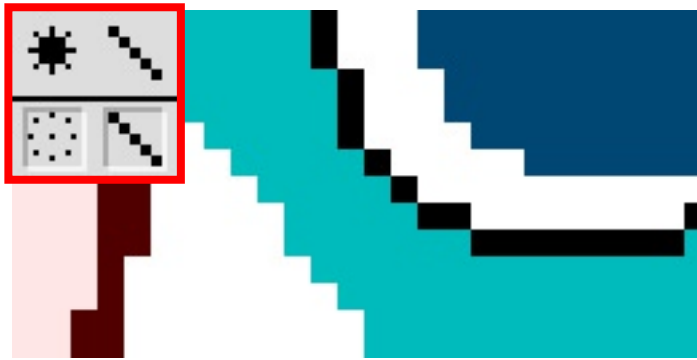
03-09-13] **Master Shy Switch**. Hides all shy selected layers.

03-09-14] **Master Frame-Blend Switch**. Enables interpolation to all layers with frame blending.

03-09-15] **Master Motion-Blur Switch**. Applies motion blur to all layers with motion blur selected.

	In	Out	Duration	Stretch	
1	0:00:04:08	0:00:06:00	0:00:01:23	100.0%	vectorFile.ai
2	0:00:01:24	0:00:03:25	0:00:02:02	100.0%	vectorFile.ai

03-10 continuously rasterize and quality explained



03-10-01] In this first example **BOTH** *continuously-rasterize* and *quality* are turned **OFF**. No *continuous rasterizing* results in the object being scaled after being rasterized once at its native resolution, producing dramatic aliasing [large blocky pixels]. Turning off *quality* means that there is no anti-aliasing at the pixel level, resulting in hard transitions between tone and colour. This is a good editing mode though, as omitting both of these calculations reduces render times by at least a factor of four.



03-10-02] In this second example *continuously-rasterize* is still turned **OFF**, but *quality* is now turned **ON**. Turning *quality* on tells *After Effects* to perform an anti-aliasing pass over the frame, resulting in smooth transitions between tone and colour. Since *continuous rasterizing* is still turned off though, the large blocks of dramatic aliasing are still visible through the smoothing of *quality* mode's anti-aliasing.



03-10-03] In this third example *continuously-rasterize* is now turned **ON**, but *quality* has been turned back **OFF**. Turning *continuously-rasterize* on tells *After Effects* to perform all transform functions prior to rasterizing. In other words, *After Effects* must now perform a new rasterize calculation for every frame, hence the use of the word *continuous*. The benefit is that each frame has a new bitmap specific to its resolution and orientation. Since *quality* is turned off though, no anti-aliasing pass has been performed, resulting in the pixel level blockiness of hard transitions between tone and colour.



03-10-04] Finally **BOTH** *continuously-rasterize* and *quality* are turned **ON**. *Continuously-rasterize* tells *After Effects* to perform all transform functions prior to rasterizing, resulting in a new rasterize calculation for every frame. Since each frame now has a new bitmap specific to its resolution and orientation, the object's form is being described at a pixel for pixel level. *Quality* tells *After Effects* to perform an anti-aliasing pass over the frame, resulting in pixel level smooth transitions between tone and colour. Note that this **BEST** mode will bring slow machines to a crawl.