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TIME LENGTH

2 hours

INFO

Nick Sneath is an in-house animator for London-based creative services house Three Blind Mice. One of the UK's top storyboard/visualisation companies, it specialises in animation, 3D design and live action work. For details, visit www.three-blind-mice.co.uk

AFTER EFFECTS

CREATE AN ANIMATIC

After Effects is not only a top special effects app used by broadcast professionals, it's also a first-rate animation package in its own right. Nick Sneath reveals how to transform your *Photoshop* files into a professional animatic

This tutorial will take you through all the necessary steps to create an animated scene that focuses on an essential animation technique: the walk cycle. You'll create the material for this piece using a hand-drawn sketch of a character already scanned in and cut out in *Photoshop*, then bring the result to life with the help of a *QuickTime* movie of a *Poser* animation.

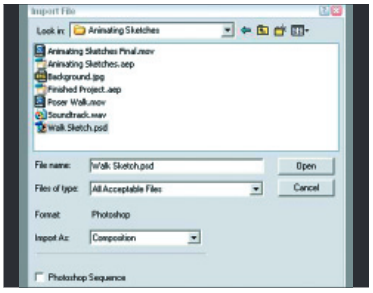
Note that such a complex animation would be an arduous process without such a reference materials, which prove valuable when your budget is limited and time is pressing. As usual, all the relevant files are provided on the cover CD.

As a final flourish, you'll learn how to duplicate and set each figure within a 3D space with an animated background.

For a full preview, open the Animating Sketches Final.mov file on the cover CD. We're sure you'll be impressed.

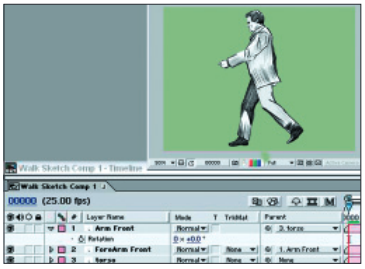
The imagery used in this particular piece comes from an animatic created for a London-based advertising agency. Animatics are proving very popular in film production and advertising, because they're a quick way to see how well ideas work – and relatively cheap to make. Ad agencies often use them to pitch to potential clients. Before an inch of film is shot or a dab of paint added to an animation cel, the client can see clearly how the piece will look, and make changes accordingly.

Animatic and tutorial by Nick Sneath
www.three-blind-mice.co.uk

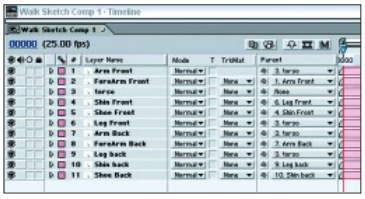


1 Copy the Animating Sketches folder from the cover CD to your computer. Open the Animating Sketches.aep file. Import the file Walk Sketch.psd, selecting Composition from the Import As drop-down list. This imports the file with the layers intact. Double-click on Walk Sketch comp1 to open it on the timeline. Make the composition 50 frames long, at 25fps (Composition→Composition Settings).

2 Select the Arm Front layer. Choose the Pan Behind tool from the Tool palette and Move the Anchor Point to the top of the arm, where it would naturally connect to the shoulder. This changes the layer's pivot point. You now need to parent the arm to the torso. Open the parent column on the timeline (Wing menu→Panels→Parent). Select Torso from the drop-down list.



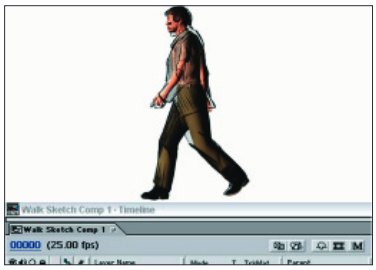
3 Repeat this process for the ForeArm Front layer. Using the Pan Behind tool, move the forearm's Anchor Point to the elbow joint, and parent the ForeArm Front layer to the Arm Front layer. Select the latter on the timeline and adjust Rotation to see how the parent layer affects the child layer. Return the layer to a Rotation value of 0.



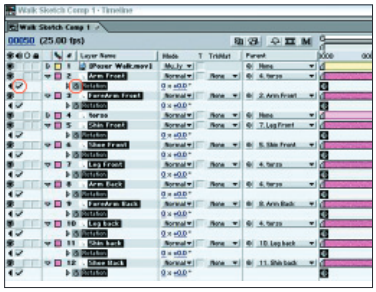
4 Repeat the process carried out in step 2 for the other limbs. Parent the feet to the corresponding shins, the shins to the corresponding legs, the legs to the torso, etc. Don't forget to alter the layers' Anchor Points, so that they're all correctly hinged to their corresponding layers.

FOR REFERENCE

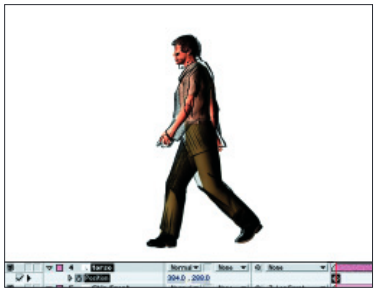
Poser is a useful tool for animation. You can adjust the *Poser* figure's dimensions to match your own characters, then use any of its preset poses as reference points. The Walk Designer is particularly useful for creating your own walk cycles. But if you prefer working with actual footage, there are many GIF animations of Eadweard Muybridge's work available online. Muybridge was a pioneer in capturing photographically the motion of humans and animals.



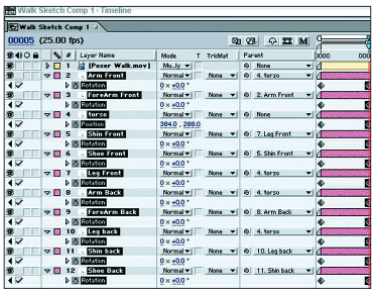
5 Drag Poser Walk.mov from the Project window and place it at the top of the timeline (Layer→Bring Layer To Front). Change its Layer Mode to Multiply – this enables you to see both figures simultaneously. Note that the images are already lined up, but not exactly, as they have different proportions. Still, it's close enough for you to trace the motion of the *Poser* figure's walk cycle.



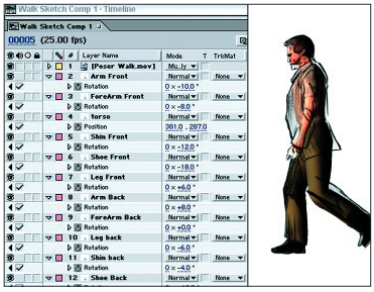
6 Select all the hand-drawn layers, apart from the torso. Hit [R] to bring up their Rotation values, and make sure you're at frame 0. Click on the Stopwatch icons next to the word Rotation to create keyframes on all the layers. At frame 50, click in the layers' checkboxes to create more keyframes. You should now have a perfect loop, regardless of the Rotation values keyframed in-between.



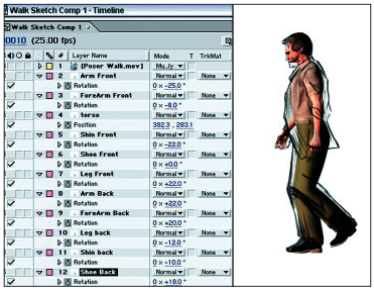
7 Select the torso layer. Hit [P] to open the layer's Position properties. Create a keyframe at frame 0 and frame 50.



8 Go to frame 5. You'll now need to move the hand-drawn figure's parts every five frames to follow the *Poser* figure's movements (five frames work well, but you can opt for another number if you prefer). Create keyframes by clicking the checkboxes on all the hand-drawn layers.



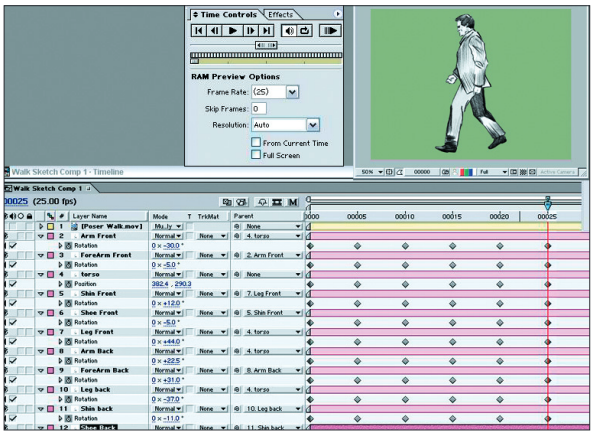
9 First, move the torso layer up or down, following the *Poser* figure. Now rotate the limbs one by one, starting with the layers attached to the torso. You may need to turn off the torso layer while adjusting the rear arm.

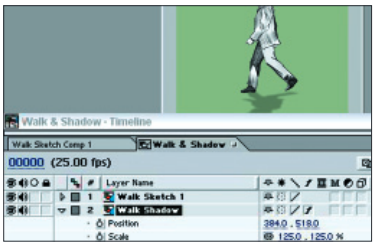


10 Repeat the same process at frame 10, then every five frames thereafter until you reach frame 25. The limbs won't always line up, but don't fret about that. As long as all the parts remain parallel – ie, the shin front layer remains parallel to the *Poser* figure's front shin – the animation will work.

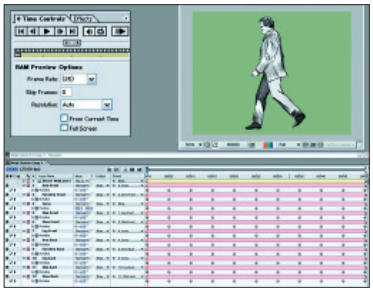
AFTER EFFECTS

11 Now's a good time to do a test-run. Turn the Poser Walk.mov layer off and click on the RAM Preview button in the Time Controls palette. Reduce your resolution for a quicker result. If you hold the Shift key down when hitting RAM Preview you will greatly reduce the waiting time.

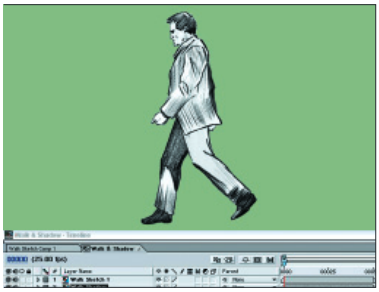




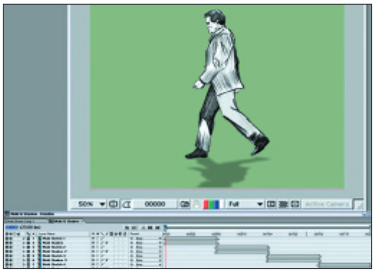
16 You'll need to amend the shadow to complete the illusion. Hit [P] and change its Position information to 384, 518. Hit [S] and change its Scale information to 125 per cent. Finally, hit [T] and change its Opacity information to 25 per cent.



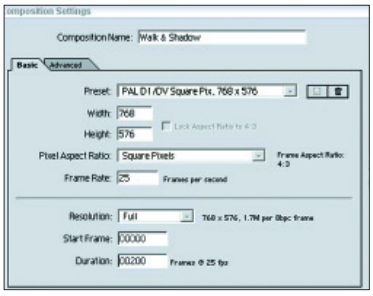
12 If everything looks fine, continue with the remainder of the frames up to 50. Then RAM Preview again to see the full cycle. If anything looks awry, you might need to check your Anchor Points. Compare your project with the Finished Project.aep file, included in the folder on the cover CD.



14 Drag the Walk Sketch comp1 from the Project window to the timeline (this process is called "nesting"). You'll need to duplicate this layer to create a shadow. Select Walk Sketch comp1 on the timeline, then Edit→Duplicate. With the duplicated layer selected, hit Return and change the layer's name to "Walk Shadow". Place this layer below the other layer. You'll need to change the Composition's Background Colour if it's currently set to black.



17 Duplicate both layers and position them, starting at frame 50. Create two more sets of duplicates, starting them at frame 100 and 150 respectively. There should now be a continuous loop lasting 200 frames. Create a new composition called "Man & Background", with the same presets and duration as the Walk & Shadow composition. Nest the Walk & Shadow composition inside it.



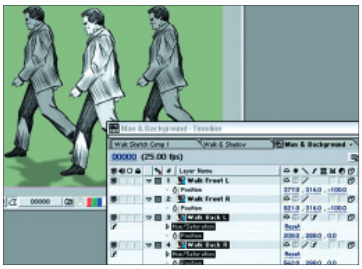
13 Once you're happy with your walk cycle, create a new composition and call it "Walk & Shadow". Choose "PALl D1/DV Square Pix, 768x576" from the Preset drop-down list, as shown above. Set the Duration at 200 frames (8 seconds at 25fps).

15 Now add effects to the Walk Shadow layer to give it a shadow-like appearance. Add Basic 3D and change the Tilt value to 99 (Effects→Perspective→Basic 3D). Now add Hue/Saturation, changing the Lightness value to – 100 (Effects→Adjust→Hue/Saturation). Finally, add Fast Blur, changing the Blurriness value to 4.

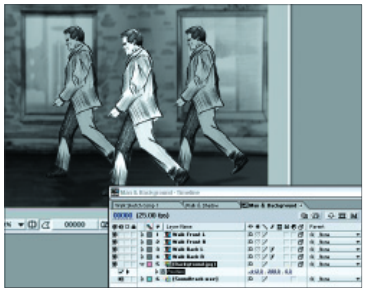
18 Make the Walk & Shadow comp layer 3D by clicking its 3D checkbox on the timeline. Change the layer's position to 208, 288, 0 and rename it "Walk Back L". Duplicate the layer, naming it "Walk Back R" and change its position to 562, 288, 0.

EASY EASE

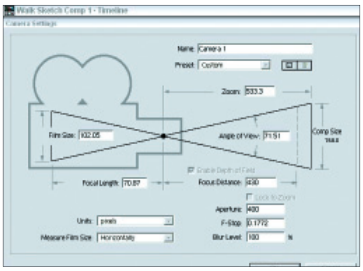
Use Easy Ease (under Keyframe Assistant) to enhance the realism of your animations. This useful function softens the change between keyframe values, resulting in more organic and naturalistic movement. Simply apply a keyframe every time your character's foot touches the ground and adjust its interpolation with the Easy Ease settings. Without it, figures look like they're walking along a conveyor belt!



19 Duplicate Walk Back L and rename it "Walk Front L", changing its position to -87, 28, -100. Duplicate Walk Front L and rename it "Walk Front R", changing its position to 357, 28, -100. Apply the Hue/Saturation effect to layers Walk Back L and Walk Back R, changing the Lightness value to -24. (You won't be able to see Walk Front R, because it's currently off-screen.)



20 Drop Background.jpg and Soundtrack.wav into the timeline at frame 0. Select the Background.jpg layer, make it a 3D layer and send it to the back. At frame 0, change its position to -412, 288, 0 and set a keyframe. Go to frame 200 and change the layer's position to 1147, 288, 0. Set your Composition to Advanced 3D (Composition→Composition Settings→Advanced→Rendering Plug-in→Advanced 3D).



21 Create a Camera (Layer→New→Camera) and select Custom from the Preset drop-down list. Enable the Camera's Depth of Field setting. Set the Focus Distance to 430 and the Aperture to 400. Double-check that the values are as shown above.

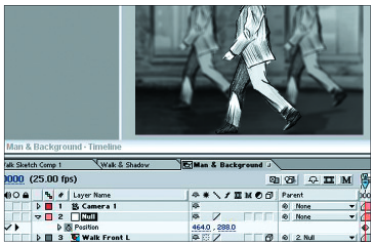
22 The foreground figures are in focus, but the background figures are not. Select the Camera's Focus Distance on the timeline. Set a keyframe at frame 65.

23 Now create a Rack Focus – to alter the animation's focal point from the foreground to the background and back again. Go to frame 75 and change the Camera's Focus Distance to 505. Add another keyframe at frame 140 with the same value. Go to frame 150 and change the Camera's Focus Distance back to 430.

24 You now need the two foreground figures to move across the camera, from left to right, while the background figures remain in line with the camera. Note that foreground objects appear to cover a greater distance than background objects, because of perspective. At frame 0, create a new Null Object (Layer→New→Null Object).

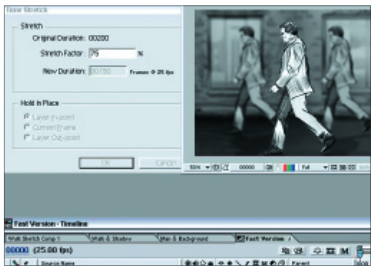
LOOPING

The finished piece in this tutorial loops perfectly. This can be useful when you're designing animations for use in non-linear products, such as DVD menus, CD-ROMs or for the web, where memory is at a premium. For interactive media, a looping animation is an appealing option.



25 Parent Walk Front L and Walk Front R to the Null Layer. At frame 0, change the Null's position to 464, 288 and set a keyframe. At frame 200, change the Null Layer's position to 18, 288. This loops the foreground figures walking from right to left.

26 Create a *QuickTime* movie and make the movie half size (384x288) for smooth playback. Now play the movie in the *QuickTime* Player, changing the Movie setting to loop. Notice how the movie loops and how the audio contributes to the mechanical, clockwork nature of the animation.



27 Create a new Composition called "Fast Version" and make it 150 frames long. Nest the Man & Background Comp inside it and change the layer's speed to 75 per cent (Layer→Time Stretch). Create a new *QuickTime* Movie and compare the two. Feel free to experiment with this! arts

NEXT ISSUE IN COMPUTER arts

CHARACTER DESIGN
Bring your characters to life with our in-depth expert guide