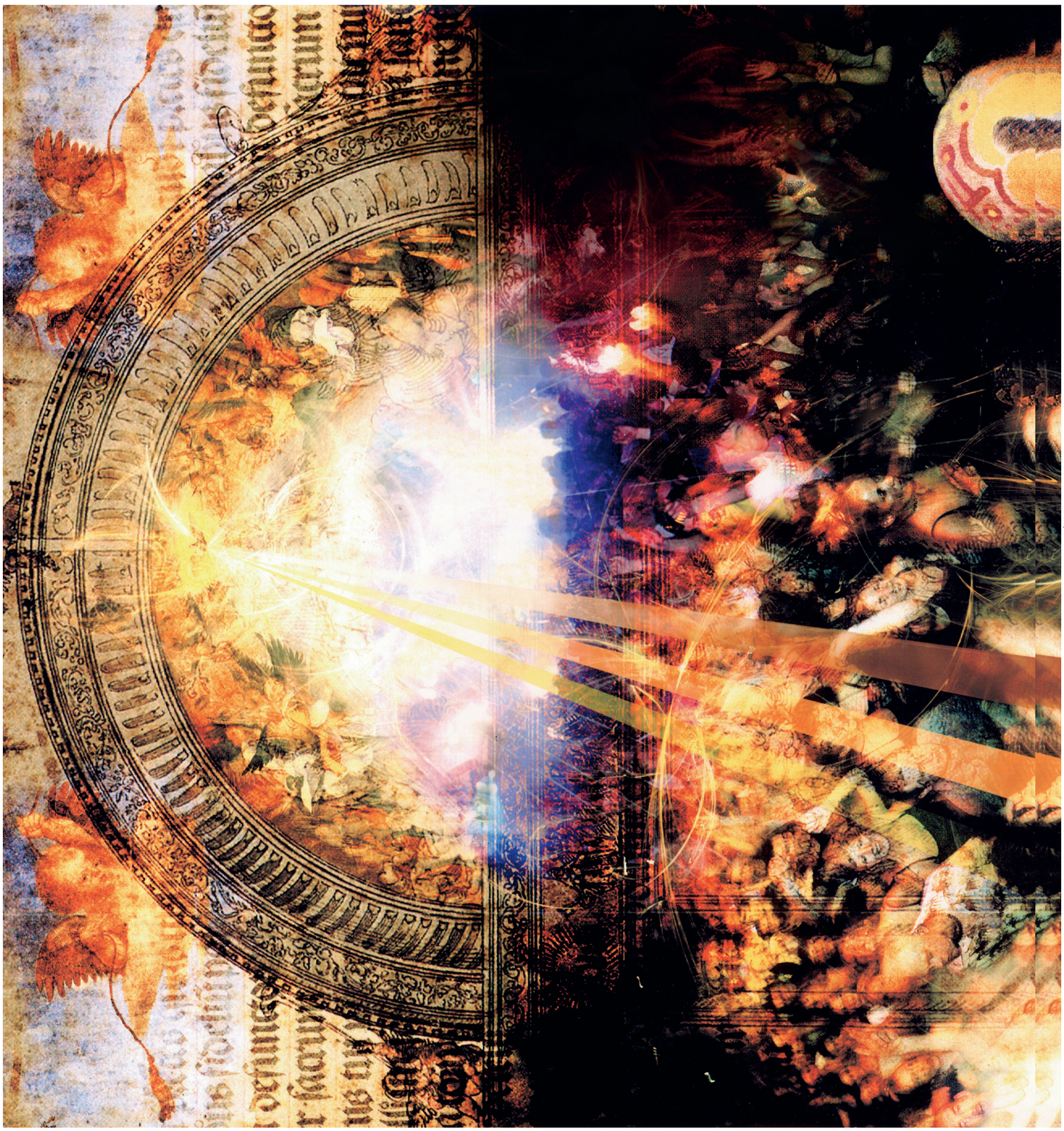

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Tutorial

[illustration] Clusta, www.clusta.com

Creating club visuals

Club video graphics cover a world of design, from grunged up video visuals to pristine digital eye candy…

When it comes to VJing, almost anything goes, from any digital source – including cameras, camcorders, mobiles and vintage clip downloads. It's a similar story with digitally generated content – rendered 3D animations, Flash animations, text, logos, *Illustrator* files and even random PDFs are all fair game in the creative world of club visuals. The goal is excitement and impact, not video realism or production gloss. So with all this variety, how do you decide how to put a performance together? We're going to break down the content into three main elements to make it simple.

The first is looping. A loop can be any section of video that looks good looped – which isn't much use as an academic definition, but makes sense when you see it in action. The creative point is that loops build up, or sometimes destroy, viewer expectation about what's going to happen next. Loops also establish a rhythm, and professionals will sync either their loops in time with the music, or add video scratch and stutter effects that play around the beat. (Watch any pop promo and you'll see that while there's often a rhythm, it's only rarely that cuts are made exactly on a beat.)

The second element is pure psychedelic eye candy – bright colours, spacey shapes and objects, impossible movements and transformations, and anything else that contributes to full-on psychedelic wig-out. Too much of this can become tiring to watch, so it's good to add this more as spice than the main course, although as with anything else in VJing, this depends on the venue and the audience.

The final element is mood, setting and reference. Moods can vary from soft and dreamy to hard-edged and technological, and the easiest way to use this element is to include footage that shows what you're trying to suggest in a very literal way. For example, use grimy street footage to suggest urban grunge. If this seems simple, that's because it is.

You can add text effects, logos, and even messages for extra points. But the whole impression is what matters most, and this is where the skill comes in. There are no shortcuts for creative interpretation, but even experimenting on your own you'll find there's a rare exhilaration when it all comes together.

Expertise provided by Richard Wentk of Skydancer Media, www.skydancer.com. When he's not writing about Macs and PCs and running a media and design consultancy, Wentk can be found contributing visuals to club and festival events around the UK and on the continent. His next big gig is the Different Skies festival in the Arizona desert this September.

You'll find demo versions of *Resolume* and *R4* on the *Computer Arts Projects* CD88, and the video graphics created in this tutorial are in the DiscContent\Tutorials\Tutorial Files\Club visuals folder.

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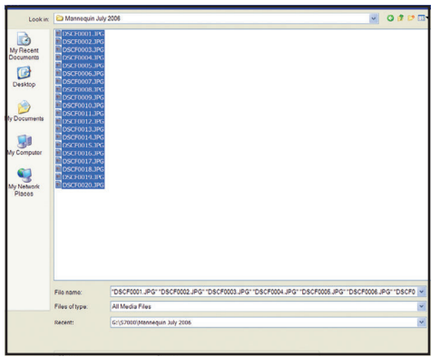
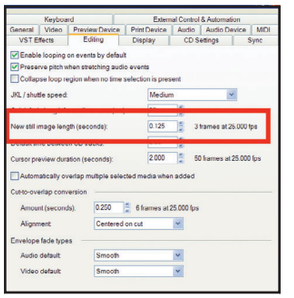
Part 1: Stopping the motion

Make video from photos? It's not as hard as you might think…

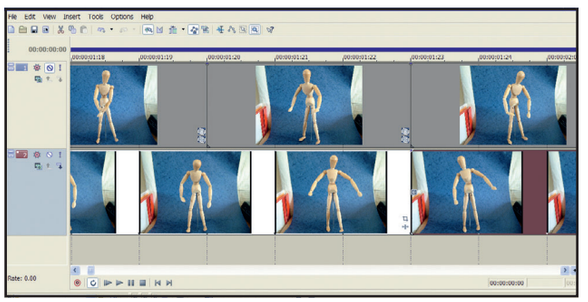
1 With so many sources to choose from, it's easy to opt for the familiar. So we won't – instead, we'll show how to use digital photography to create a stop motion animation by combining stills into a short video clip.



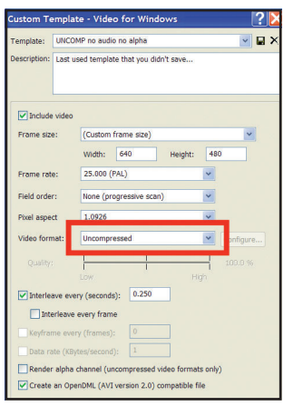
2 Set up any object/s you think could look interesting. Start by taking a collection of frames with your digital camera using a low resolution such as 640x480 or 1024x768. Move the object a little between frames. Make each step difference small so you have a smooth animation.



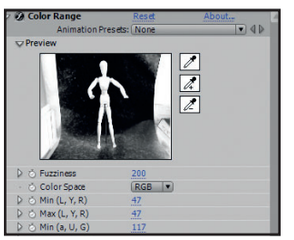
3 We'll use *Sony Vegas* to assemble the sequence, but you'll find equivalent features in most video editors. We set up *Vegas* so each still lasts three frames. We import our photos as an image sequence and *Vegas* puts them on the timeline one after the other to create a single clip.



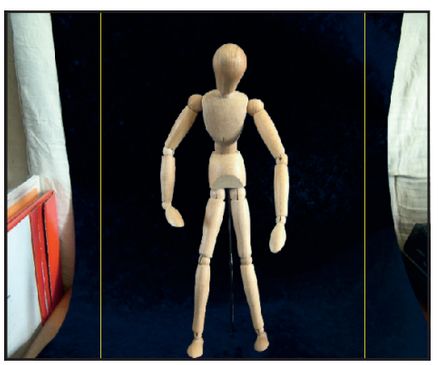
4 The easiest way to make a good loop is to copy the same sequence onto the end of your original and reverse it. Pendulum motion is inherently rhythmic and always looks good when looped, but you may need to trim the start and end points to get the best effect.



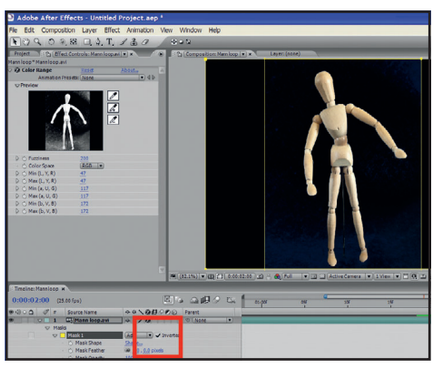
5 Combine your still sequence into a single video clip by rendering it as a file. If you have enough disk space to spare, save the clip uncompressed. You'll need to recompress it for performance, but it's good to have maximum quality source files that can be re-used in other projects.



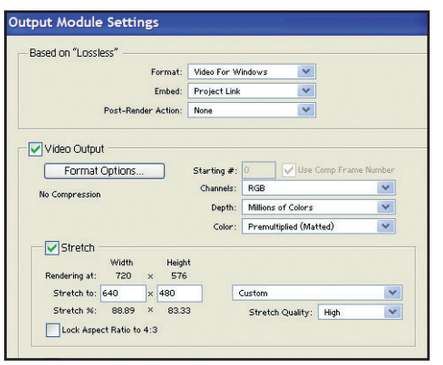
6 We've used some blue card as a blue screen background for our scene, and we now need to remove it. We import the rendered clip into *After Effects* and select the ColourRange effect for the keying. But most video editors include a keying feature you can use instead.



7 Select the card with the Eyedropper, set ColourSpace to RGB and turn up the Fuzziness to 200. You'll see that the card disappears and is replaced with a more neutral black. Mask out the edges of the shot by using the Rectangular Marquee tool to draw a selection box around the target area.



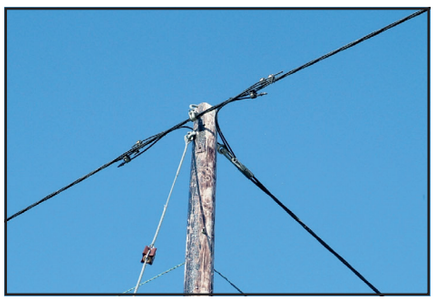
8 Select the Mask properties, open up the parameters and click on the Inverted option to mask in the mannequin and remove the rest of the frame. (Making masks and selections for video is a lot like masking stills in *Photoshop*.) Now our animated mannequin is on a black background.



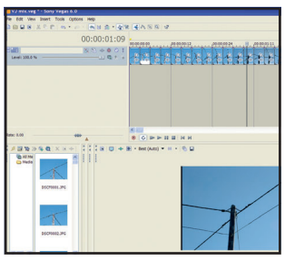
9 The final stage is to render this cleaned up sequence to a new file, uncompressed again. So add the file to *After Effects'* render queue and save it with a new name. At this point you can delete the intermediate unmasked sequence because it's not needed any more.

Part 2: Into the real world

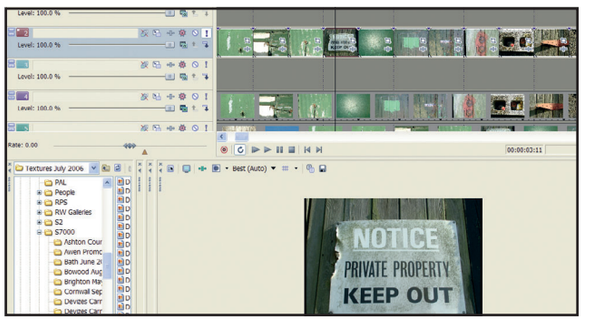
Extend the stop motion technique with other kinds of video sequences…



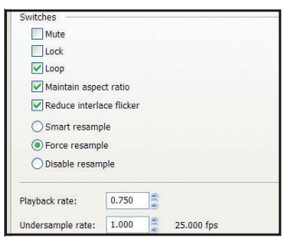
1 Stop motion is used a lot when making VJ loops because it looks good, and it also brings in real-world elements in a stylised rather than a naturalistic way. It's not limited to traditional animation either. For another couple of loops, we'll use some outdoor source shots – like this telegraph pole.



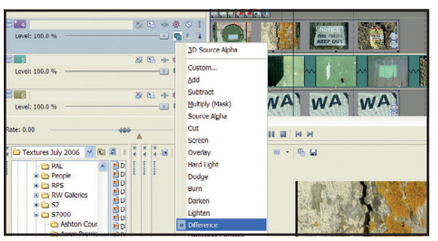
2 You can create a good alternative effect by setting up the camera on a tripod and physically moving it around an object. Keep the viewfinder on the same part of the object for each shot, so it doesn't wobble up and down. Assemble the sequence as before.



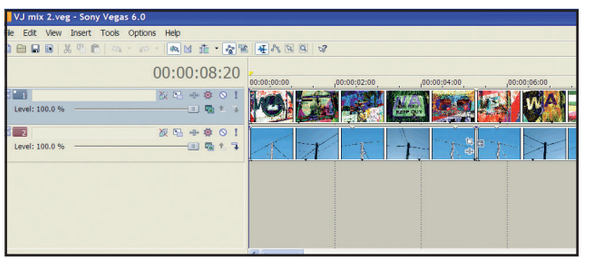
3 Another alternative is to shoot some random stills and assemble them into a flicker sequence. You can use almost anything for this, including textures, signs, shapes and objects. Here we've taken some shots around an abandoned grain store – you can find them on the *Computer Arts Projects* CD88.



4 Render your sequence to disk. Load in two copies, and change the playback rate of one of them. One reason for this is to make sure the flicker sequence isn't too strobey and flickery.



5 Another reason for this is that combining the same clip at different speeds is a good and fast way to make it look more interesting. Select a difference blend for the top clip, and you'll see the combined clip suddenly turns into a set of more abstract flickering textures and shapes.

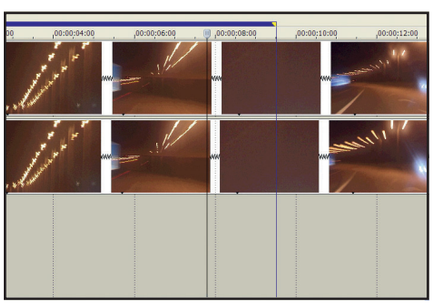


6 We add a Levels effect to our differenced clip to bring out the colours, render it, and then combine it with the rotating pole sequence. Again, we use pendulum motion on the pole clip to create a good loop. The finished mix has a nice blend of texture, rhythm and motion.

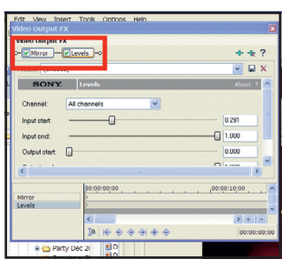
Part 3: Video in motion

You can use raw video for VJing too – as long as you process it…

1 What about using video source material? The advantage of video is that it doesn't have to be assembled, so putting together a video loop is much easier. Again, almost anything will work as content. For this clip we've used some motorway road footage as a starting point.



2 The same creative techniques that work for still sequences – such as pendulum motion, timestretching, different kinds of blends – work just as well for video. Here, we've time-compressed the sequence to make it faster, and then combined two copies of the footage running at slightly different timestretch rates.



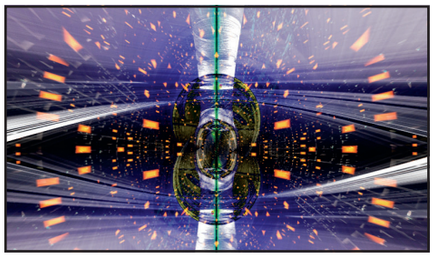
3 It's worth experimenting with effects for extra interest. As we'll see later, these can be added in real time during a performance. But sometimes it's worth preprocessing a clip. Mirror effects always look great, and the Levels tool will add visual punch to a clip and help bury any digital noise.

Make a resolution

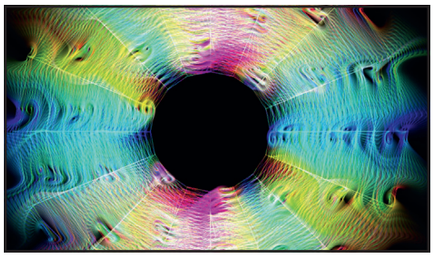
VJing took off when computers were a lot less powerful than they are today, so output resolutions started off at a minimal 320x240. Some VJs still use this resolution today, and it's certainly fast and compact. 640x480 gives much better video quality, and will be good enough for most gigs. Superstars use HD resolutions, but the hardware required is well outside of the beginner price bracket.

Part 4: Instant eye candy

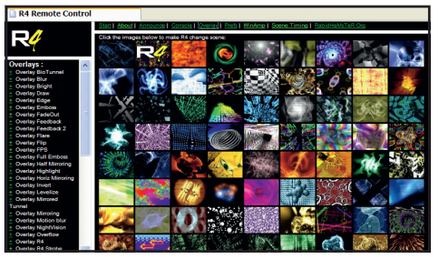
If you're lazy, this is the fast and easy way to make funky visual animations…



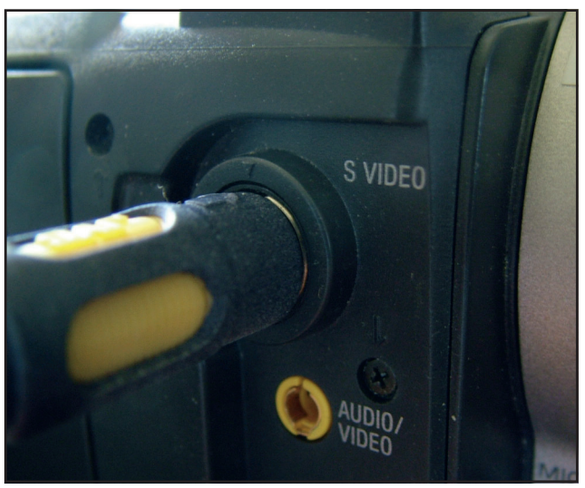
1 The hard way to make eye candy is to render it offline. *Bryce* (used here), *Maya, 3D Studio, Lightwave* and even *POVRay* will all do a good job. They'll also take forever, both to set up a scene and to render it as an animation. There are better ways to do this.



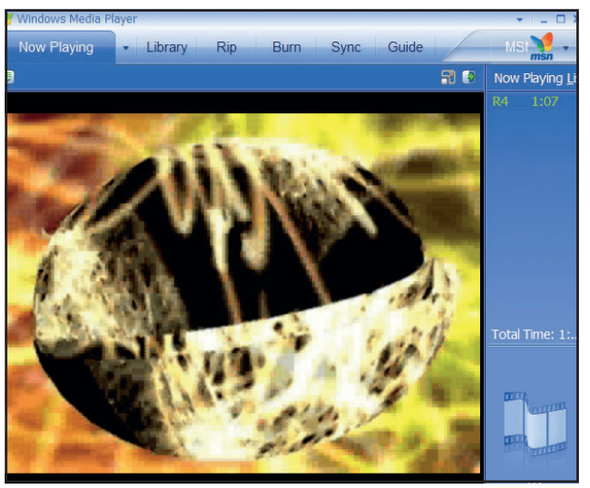
2 VJs often use visualiser tools to create eye candy. This can be done in real time, with a live feed from the DJ's decks. A simpler option is to load a visualiser tool – such as Rabid Hamster's *R4* here (a version of which can be found on CD88) – and to vidcap the output to a file.



3 *R4* has a useful web-based interface. Start *R4*, hit Esc to show the options, turn on network control, and then point a browser at http://localhost:8888. (You may need to hand-edit the preferences file to turn on network control first.) You'll see this thumbnail window. Select presets by clicking on them.



4 Vidcap the output of a visualiser by using a video tool like *Fraps* (www.fraps.com) to record the output direct to disk. Alternatively, if you have a spare video out, you can use an S-Video lead to record the output to a camcorder. Firewire output will work for some visualisers too.



5 We created the demo clip on CD88 by clicking around the *R4* interface at random. You often don't need anything more complicated than this. You can get inside your visualiser and customise the output for advanced use. A selection of 30 or 40 short clips will often be enough for a gig.

Mac vs PC

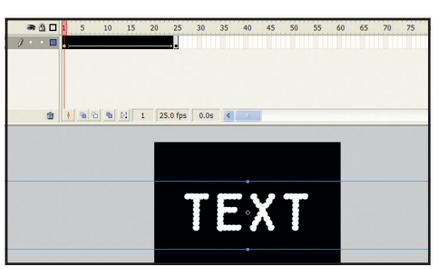
Although *Resolume* is currently PC only, a Mac version will be released with Version 3. In the meantime, Mac users could try *Arkaos* (www.arkaos.net) which offers a similar set of features to *Resolume*. Functionally the two products are similar, but the *Arkaos* interface is more complicated and less transparent, which makes it a less appealing choice for beginners.

Part 5: Flash messaging

Extend your visual library with animated text effects, and other Flash standards…

1 Most of the VJ performance tools include a Flash playback feature, and anything you can use in FlashScript can appear as part of your act. Some tools will also let you dynamically control Flash variables while you're performing.

2 As a simple demonstration, we'll customise this text message. Open the Zoomer.fla file that comes with the *Resolume* demo content, select the text box and change the font to something different – this Fake Receipt font looks good. Remember to change the font for the last keyframe too, and anything you can use in FlashScript can appear as part of your performance. Some tools will also let you dynamically control Flash variables while you're performing.



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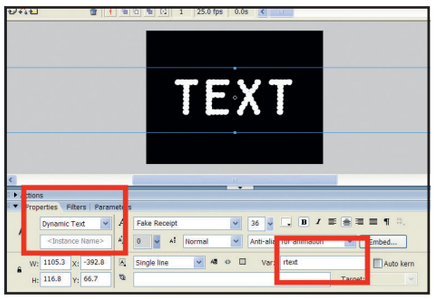
Flash messaging continued...

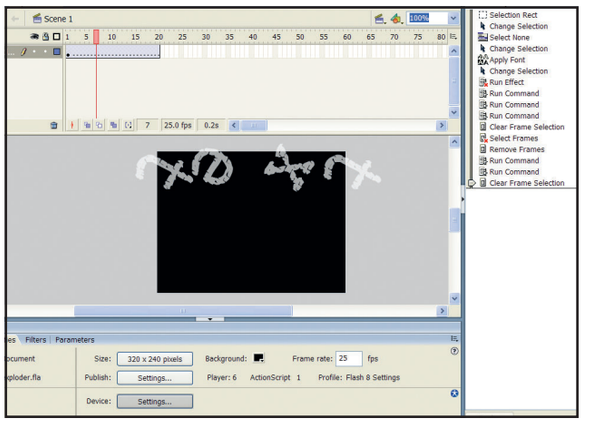


3 Select the Text Properties and make sure they're set to Dynamic Text, and that the associated variable is called rtext – we'll see why later. Repeat this for the final keyframe too. Save the file as Zoomer2.fla. (We've already included a version of this on the CD.)

4 How far can you go with Flash? For VJing, as far as you like. Flash is often used for text and messages that can be changed on the fly. But there's no reason not to use other animations – including the ones built into Flash itself, or downloaded as FLAs from the web.

MIDI control

Because a QWERTY keyboard is less than ideal for VJ performance, advanced VJs use external controllers that connect into the performance software using MIDI. You can trigger clips from the keys with a MIDI keyboard, and set performance parameters and modes using the controller's knobs and switches.



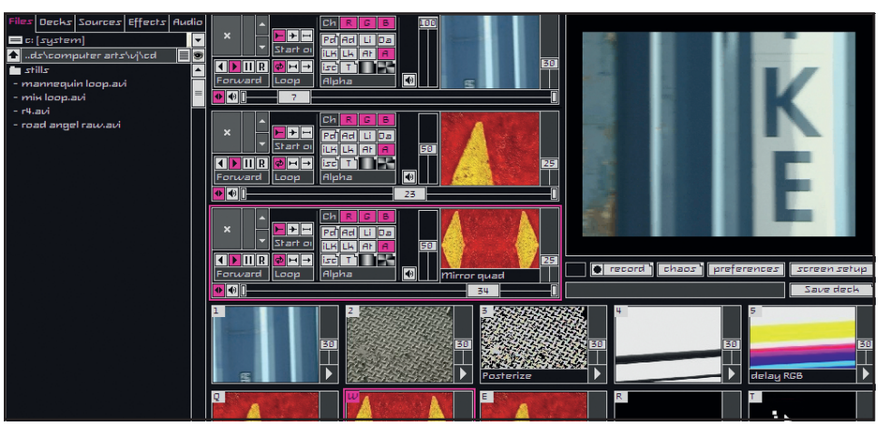
Part 6: Playing it live

Once your content is ready, you can put it all together into a live performance…

1 So, now that we have some source footage, how do we put a performance together? The hard(ware) way is to burn a library of clips to DVD, use a couple of cheap players and robust remotes, and mix them with a video mixer like the famously VJ-friendly Edirol V-4.

2 The simpler way is to do it all in software. You'll need a PC with a video output, and this tool, which is called *Resolume* (a demo version of which can be found on CD88), and is used by professional VJs the world over. *Resolume* can play up to three video clips at once, and offers control over speed, mixing and other essentials.

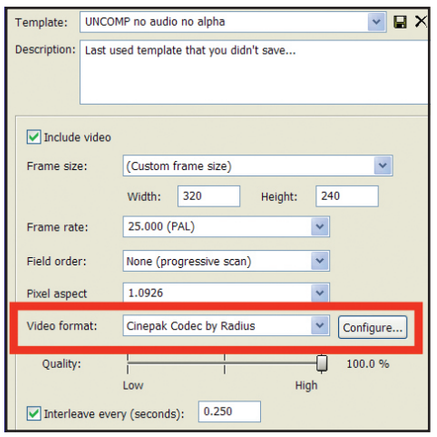
3 The bottom 20 windows are pre-loaded clips. You can drag any file to these from the list at the left. The top three windows are decks. To play a clip, select a deck and then click on a clip. It loads into the deck and starts playing.

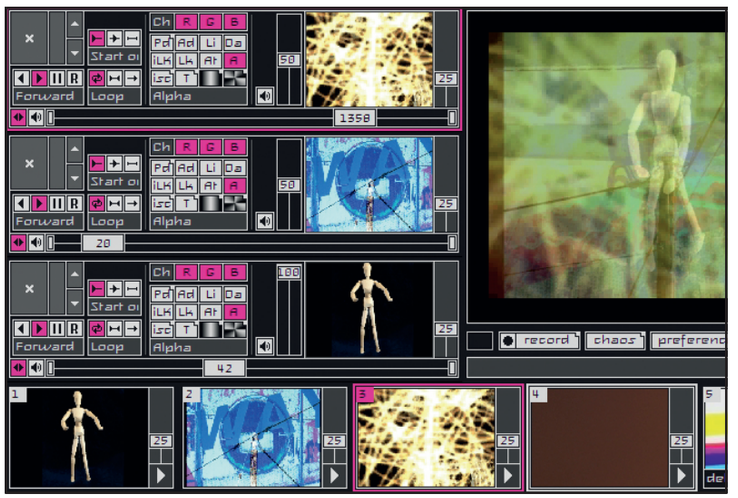


Music control

Resolume and other VJ performance tools include sound-based features that can modify effects and performances according to the incoming sound. You can do a successful set without using these at all, but used well they can add some impressive synaesthetic effects. But keep it simple – start small and don't get too ambitious until you've mastered the basics.

4 *Resolume* enables you to create scratching and stuttering effects, but files have to be recompressed to the Cinepak format – a common codec – with a keyframe for every frame. This ensures that reverse and forward playback are equally smooth.

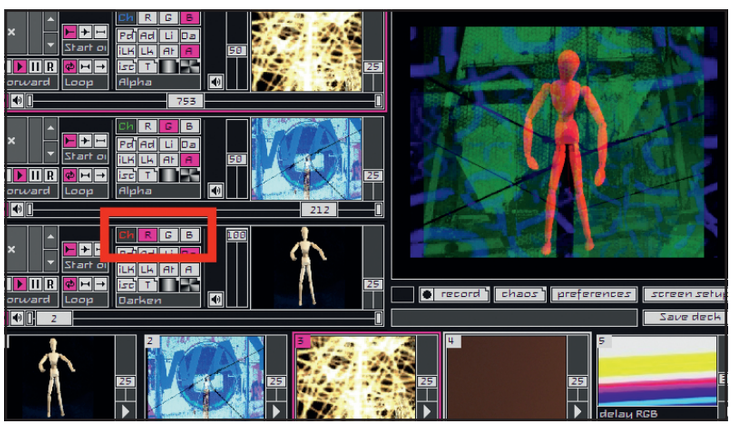




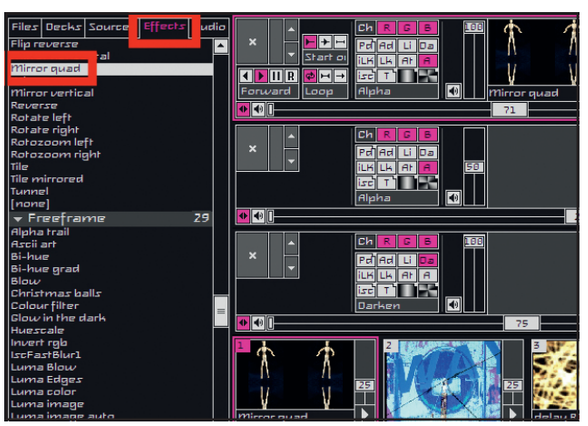
5 Each deck has its own performance controls. Use the forward, back, random and pause buttons to control playback. At the right are blending modes, similar to those in *Photoshop*. You can combine the clips on the decks in different ways with these, much like combining layers.

6 You can explore how our custom clips work in *Resolume* by copying them to disk from the *Computer Arts Projects* CD88. Then select the Files options at the right, find your way to the copies, load them into the clip slots and, from there, into the decks. Use the frames per second (fps) slider to control playback speed.

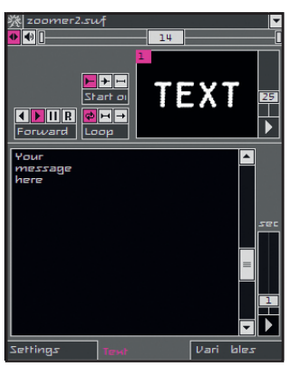
7 Another creative effect is channel control. Experiment with the RGB buttons for each deck to turn the different colour channels on and off. Also, the opacity slider at the left of each deck preview controls how visible its output is. For instant VJ skill, click Chaos under the main preview.



8 Select the Effects tab from the top left, and experiment with dragging different real-time visual effects onto the mannequin loop – it's simple enough to show what each effect does very clearly. Mirror quad and Alpha trail are both worth trying, but all the effects do something interesting, so have a play around with them.



9 Finally, if you want to add messages, load the zoomer2.fla file to a clip slot and right-click on it to show its properties. Select Text and type in a message. Load the clip into a deck, and it'll be updated with your text, while also being animated in the traditional Flash way. ca-p



VJ multiplex

You'll often see VJs controlling multiple screens, and *R4* and *Resolume* both include multiscreen features. A good performance technique is to switch between spreading independent content across the screens and using an identical video stream for all of them.

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