

Jack Fisher



PhotoPlus Super Tip!

“The time it takes to create a hyperlapse is divided between the planning, shooting and post-processing stages; it can be done in as little as an afternoon, but can take much longer. My *Bath in Motion* film comprises over 30 sequences and several thousand stills, and took three-and-a-half months to complete! Scout locations beforehand; look for flat areas so that you won't have to adjust the legs of your tripod for every exposure, and walk your intended routes to check for potential problems before you turn up with your kit. How long it takes to shoot a sequence depends on how much ground you want to physically cover, and the interval/distance you leave between each shot and camera movement, but you can reckon on between 45 minutes and four hours. Post-production will take another couple of hours (this is a processor-intensive task, and dependent on the speed of your computer), with a whole lot of waiting for your movie to render.”

PROJECT

Create a hyperlapse!

Master the shooting skills and editing techniques you'll need to create a stunning time-lapse movie, using tracking shots for extra dynamism

A time-lapse is essentially a sequence of photos taken at regular intervals and then compiled into a movie to create the effect of speeding up time. Typical time-lapses may show a flower blooming over the course of a couple of minutes, or an entire day compressed into a few seconds. A hyperlapse takes things a step further. It's a form of time-lapse photography, but

rather than the camera remaining stationary its position is changed between each exposure to create a tracking shot, giving the movie a dynamic sense of movement. This added dimension naturally means more work, both to capture the shots and create the movie, than for a standard time-lapse. In this tutorial I'll show you the techniques I used to achieve the long tracking shots in

my hyperlapse film *Bath in Motion* (see vimeo.com/75873515). Such a movie takes many weeks to plan, shoot and edit, so to keep things simple I'll show you how to create a short hyperlapse sequence. My post-production workflow is to batch-edit the Raw files in Adobe Lightroom, and then assemble the time-lapse in a specialist application called LRTimelapse. I then use

Adobe After Effects to smooth out the video, and Final Cut Pro to add the final bells and whistles – linking sequences, adding music and subtitles, and so on. All these programs are available as free trials if you want to give them a go, but the only essential is After Effects, for its Warp Stabiliser feature (see Step 9).

For simplicity, I've based this tutorial on Google's free Picasa editor (picasa.google.com), which has a Time Lapse feature, and I've processed the Raw files and converted them to JPEGs. A final word of advice: hyperlapse is a tricky art to master, and takes a lot of trial and error to get right – so be prepared to fail before you get a truly pleasing result.



STEP BY STEP Plan, shoot and edit a hyperlapse

PhotoPlus Checklist

- What you'll need**
Tripod • variable ND filter • remote shutter release • Google Picasa • Adobe After Effects
- How long it'll take**
One day
- The skills you'll learn**
 - ✓ How to plan a hyperlapse and shoot the component images
 - ✓ How to combine the individual shots into a movie
 - ✓ How to smooth out your movie in Adobe After Effects



Plan the sequence

1 Work out the path you want the hyperlapse to follow (flat ground will make it easier to stabilise your sequence). It can be helpful to mark out the path using features, such as bricks or paving slabs, to keep a consistent interval between camera movements for smooth sequences; alternatively, use chalk and a rope marked every metre or so to draw a path on the ground for the hyperlapse to follow. You can then align your tripod's legs on the path after each camera movement.



Work out the intervals

2 Next you need to determine the distance interval between each shot. This can be as small as 10cm and as big as 10m, depending on how far away you are from the main subject, and how much time you have; it's safer to underestimate, and use smaller intervals. If you're no more than a couple of hundred metres from the main subject, the 50-100cm interval usually produces nice smooth results.



Choose an anchor point

3 Anchor points are reference points for aligning your shots as you move the camera; for example, the top of a flagpole. Use Live View mode, and line up the point with one of the cross-points on the Live View grid. If this isn't possible, use a tiny piece of Blu Tack on the LCD as the reference point. The stabilising process can crop 10-25% into the frame, so it's best to use wider focal lengths and stand further back – but don't shoot below 24mm, as it's hard to stabilise ultra-wide shots.



Camera settings

4 We need full control over the exposure so the camera doesn't alter settings; if it does, you'll get unwanted flickering in the final movie. Select Manual mode, and set the drive mode to One Shot. Set ISO to 100 and set a narrow aperture, around f/16, for a good depth of field. A shutter speed of between 1/60 and 1/2 sec gives a nice motion blur effect; a variable ND filter is useful for consistent exposures. Disable image stabilisation, and manually focus using Live View. ▶

PhotoPlus Phrase Book

Warp Stabiliser

Moving your tripod between shots means you'll end up with shaky footage that's likely to induce motion sickness in viewers! After Effects' Warp Stabiliser analyses your footage, and smooths it out by rotating each frame so key features line up. However, as each shot is rotated this creates uneven edges; these are cropped out of the frame, which can lose 10-25%. That's why you should shoot wider than you think you need too when framing your sequence.



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As in stills photography, shooting Raw offers quality advantages over JPEGs, enabling you to fine-tune the exposure until it's spot-on. Obviously it would be enormously time-consuming to edit each Raw file in a sequence of hundreds, but Adobe Lightroom has superb batch-editing features; just edit one shot, then apply the settings to all your other shots. While I prefer to work with full-resolution Raw files, these will eat up memory card space and increase the processing time, so you may want to use medium- or low-resolution JPEGs while you're honing your skills.



Shooting the sequence

5 Take a shot using a remote release, then move your tripod and camera the determined distance, lining up two of the tripod legs so they're on the line you want to track. Align your reference crosshair or Blu Tack with your selected anchor point, and take another shot. Repeat these steps – you'll want at least 200 frames for a sequence. To create the finished movie we play these frames back at 25 frames per second, so every 25 shots equates to one second of footage.



Import into Picasa

6 Import your photos to your computer, and put them in a folder. Open Picasa, and import the images via the Import button at the top-left of the screen. Once the images have loaded, locate the folder in the panel on the left-hand side of the screen and click the Create Movie Presentation button – the icon is located just above your images, next to the Share button, and looks like a piece of film.



Create the time-lapse

7 In the window that opens, select Time Lapse from the Transition Style drop-down menu, and set Slide Duration to 1/25 Sec. Now set the dimensions of your hyperlapse. I usually opt for the highest quality settings of 1920x1080 (1080p); however, in order for our sample images to be a manageable size we've resized them to 720x405 pixels. Click Create Movie to assemble your sequence of shots into a movie file. Your hyperlapse is now ready to be stabilised.



Import into After Effects

8 Open After Effects and select Create A New Composition. Choose the setting to correspond to your saved video file: Frame Rate 25fps and Quality 1080 in our case; the other default settings are fine. It's best to give this file the same name as your original file and append IS (for image stabilisation). Import your video file – it will pop up on the left of the screen – and drag it into the Composition bar in the bottom quarter.



Warp Stabiliser

9 Go to Effects > Distort > Warp Stabiliser. This will take a few minutes to adjust and straighten each frame, and the results are quite incredible. If your shot is still a little jerky you can adjust the smoothness of the Warp Stabiliser; the default is 50%, and you can go higher than 100% if necessary, but note that increasing the Warp Stabiliser smoothness also increases the crop factor applied to your hyperlapse.



Assemble your hyperlapse

10 When you have several sequences ready to combine into a movie you'll need video software such as Final Cut Pro or Premiere Elements. The Zoom effect is useful for linking clips; the shot of the Royal Crescent in the *Bath in Motion* film, for example, is two separate hyperlapses; one shot from close up and the other from further back. The clip shot from further back forms the first half of the sequence, with a Zoom transition to the close-up hyperlapse of the Crescent.