



POWER TO THE CREATORS

Loco UK Efficiently Stitches Four 90° Plates in SCRATCH VR to Create Slo-mo 360° VR Experience

There is a special joy in witnessing a 360-film newbie spinning around with mobile phone in hand, delighting in the magical experience of the video content that surrounds them.

Loco (locomotion.co.uk) is riding this wave of 360-video excitement by exploring emerging technologies and software as well as developing new techniques to take their creative work further into this realm. Loco is a full-service production and postproduction company based in London. Established in 1994, they have a proud history of creating innovative content for the advertising, digital, film and broadcast markets. Their latest 360-film is an homage to Bob Dylan's "Subterranean Homesick Blues" with the added twist of slow-motion content. (<https://vimeo.com/222193749>)

Dave Waldman, director/editor at Loco, recently discussed their creative process for this VR production.

We wanted to shoot a never-tried-before 360-film with a high-speed Phantom camera. It's the only professional camera that shoots the frame rates needed for our VR creative. However, even if we had the thousands of pounds available to hire enough cameras to shoot 360, their size means we'd never be able to line them up. There is currently no off-the-shelf way for us to shoot a VR super slo-mo film.



Images courtesy of Loco.

Fortunately, we had already discovered with our "Homeless at Christmas" 360-film (<http://locomotion.co.uk/portfolio/360-filmmaking>) that you don't need to shoot in 360 degrees to make an effective 360-film. We could create the fully immersive effect by stitching together two 180-degree films. We just needed to find a lens that would fulfill the complete brief.

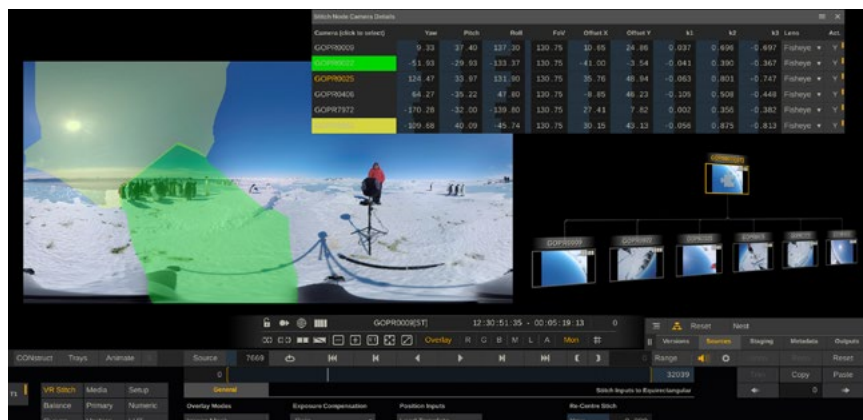
To continue our kit search, we consulted with Movietech (<http://www.movietech.co.uk>), one of the UK's largest and most experienced camera rental companies. They recommended we work with ARRI to conduct our lens tests. ARRI suggested we pair their Alexa with the Nikon 6mm fisheye lens.



Nicknamed the sack-getter because it would be so expensive to replace, the lens gives a 220° field of vision that is the same as the Samsung Gear VR headset. We could easily shoot two 180° films and stitch them together to make a 360°.

Initial tests with the Alexa were promising, but unfortunately, the lens aberrations from the 6mm fisheye were too distorted. ARRI recommended an 8mm fisheye lens, but the trade-off would be filming four 90-degree plates. That would mean more stitching in post-production, but we felt the results would be worth the extra time and effort.

Ultimately, it was Love High Speed (<http://www.lovehighspeed.com/>), the UK's largest slow-motion camera supplier who (generously) provided their Phantom camera, as well as their time and goodwill to enable us to complete the shoot.



Typical stitching frame in SCRATCH VR.

Image courtesy of ASSIMILATE.

Having successfully shot the four-component 90° plates, we needed to stitch them and render out an equirectangular image, the standard projection used in 360-video and the required formatting for social media distribution and smartphone video apps. So, we contacted the software experts at ASSIMILATE, who had recently added VR capabilities to their SCRATCH color grading suite. From the get-go, ASSIMILATE was instrumental in our post-production process, giving us full access to their SCRATCH VR beta software and donating hours of technical support, which included creating the stitch template and turning the four, individual fish-eye shots into one 360° image.



Loco UK Efficiently Stitches Four 90° Plates in SCRATCH VR to Create Slo-mo 360° VR Experience

We used After Effects to composite the four individual films, layering the real-time footage over the slow motion. These individual elements were then pushed through SCRATCH VR, making full use of SCRATCH VR's ability to animate stitching frames.

The final step was to use Premiere 2017 to export to H.265, the new, younger sibling of the H.264 codec. The processing times were incredibly long, but the resulting file was half the size of an H.264 and much sharper.

The challenge of creating a 360° content film that featured in-camera slow motion effects provided us with all the lessons of a master class, including how to manage quadrupled amounts of footage, exponentially larger file sizes, longer renders, trickier glitches and beta-stage software. It hammered home the lesson that you can't "shoot the sh*t" out of a subject and hope to "fix it in post" because in the land of 360-filmmaking, the amount of data quickly becomes unmanageable. As ever, a well-planned and boarded creative treatment with a decisive and disciplined shoot makes it far more likely that you'll have an enjoyable post-production process, remain friends with your co-creators, and deliver what was agreed in the first place.

Learn more about Loco at:
locomotion.co.uk

Director/Editor: Dave Waldman, Loco
Producer: Saša McCartney
Camera: Stephen Price
Model: Jess-Luisa Flynn
Colorist/VFX: Jon Davey
VFX: Aidan Taub
Music: Get Up by Ryan Little

Thanks:
Andrew Alexander at ARRI Rental for their generous lending of lenses, tripod & location

Love High Speed for their generous lending of the Phantom camera

