

OK GO FOR A TAKE... AGAIN... AND AGAIN



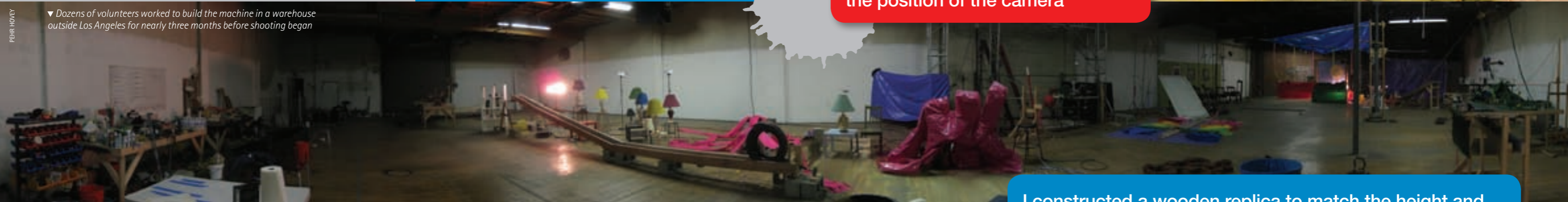
▲ For the final shot in the video, OK Go band members were splattered by paint guns

▼ The tyre ramp was equipped with light switches to trigger lights and fans as the tyre rolled by



I've always viewed operating a Steadicam system as part dance and part camerawork. It's a blend of visualising where your feet need to be in relation to your hips and the position of the camera

▼ Dozens of volunteers worked to build the machine in a warehouse outside Los Angeles for nearly three months before shooting began



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If you haven't yet seen the OK Go 'This Too Shall Pass' video, then give yourself a treat and look it up on You Tube before reading this article. Not only is it impossible not to smile at the inventiveness behind the project, but watching the video will also allow you to appreciate fully the demands of this challenging one-shot production. It's described here by Steadicam operator, Mic Waugh, winner of the 2010 GTC Award for Excellence (Entertainment) for his work on this ambitious shoot.

For the best part of the last decade I've subscribed to a practice influenced by a quote I once read: "Be adventurous. In life, you'll regret the things you didn't do more than the ones you did." This philosophy has been the cornerstone of my life both personally and professionally. As a result, I've found that my greatest adventures always seem to start with the same sequence: a phone call, a proposition and one word – 'yes!'

So, when Los Angeles-based director of photography Yon Thomas, an extremely talented professional and friend, contacted me with an interesting question, there was only one possible answer. "Would you feel

comfortable wearing your Steadicam rig and being lowered about 20 feet, from one building floor to another, whilst shooting?" I paused, smiled, then answered – 'yes!'

It was not until I arrived on set three weeks later that I truly understood the complexity of this project or the significance of my role as Steadicam operator on the video. Dermott Downs, director of photography, and producer Shirley Moyers welcomed me with, "This one's all you, man."

Welcome to 'The Machine'
OK Go singer Damian Kulash served as creative director for the shoot, as he does for all the band's very innovative videos (again, cheer yourself up by checking out some of the other OK Go videos on You Tube). This would be the band's most elaborate undertaking to date, by far, and would feature a two-storey 'Rube Goldberg machine' (for those that don't know the term, Goldberg was an American cartoonist best known for a series of

cartoons depicting complex machines performing simple tasks in indirect, convoluted ways, much along the lines of Heath Robinson).

This particular machine starts innocuously enough with a single toy car hitting a line of dominoes, triggering an increasingly over-the-top chain of events involving everything from bagatelles, pinball machines and a Lego car, to huge inflatables, opening umbrellas, cascading chairs, smashed televisions, water chutes and paint-firing cannon. Each stage

▼ Tim Nordwind, bass guitarist for OK Go, uses a State Farm logoed toy truck to start the chain reaction to propel The Machine



of the process unfolds with the band members in the back of the shot observing the ensuing mayhem and mouthing the track. Oh, and the whole amazingly complex sequence was to be captured by a single Steadicam shot... no pressure, right?

Damian was the ultimate tour guide as we made our way through the set for the first time. The warehouse was alive with frantic energy as people worked furiously to finish the massive machine. Walls were decorated with blueprints, diagrams and whiteboards filled with complex mathematical equations calculating velocity and trajectory for dozens of different items. Every corner of the place was full of contraptions, screws, repurposed toys and 'fun junk'.

Damian explained that for the past three months the band, together with engineers from Synn Labs (a team of creative engineers with day jobs at NASA and Jet Propulsion Laboratory),

friends, family and even fans had been volunteering their time to help create The Machine. They had put in 14-hour days and worked in shifts to get it built and functioning. It was up to me to make sure I was able to capture their work and translate all the beauty and science to the screen.

Our tour began outside, where the first few sequences would take place, and then zigzagged through both levels of the warehouse. Our group included director James Frost, DoP Dermott Downs and the department heads from grip and electric. We were all utterly speechless as Damian walked us through The Machine. At the end, he said just: "Questions?". I love that.

Setting up

While The Machine was going through the final round of testing and refinement, it was time to make sure

we could actually shoot it. After all, the designs were built to follow the rules of physics not production.

There was a potpourri of obstacles to negotiate, including 45 to 60 degree ramps, support beams for the warehouse and a makeshift elevator comprised of a pulley system and harness to lower me from one floor to another while keeping my feet 'grounded' at all times. This is because the Steadicam system is designed to use the operator's body weight to maintain a centre of gravity for the overall rig (camera, system and operator). An elevator pulley system that would carry my weight plus the steadicam rig (approximately 210lbs, or just shy of 100 kilos) was built.

One of the most difficult elements for me was getting my body in the right position when moving from one part of the shot to the next. Camera position is rarely a challenge, but when it's attached to a 175-pound

man wearing a padded vest, spring-loaded metal arm and a safety harness (necessary for the descent from the second floor), it can quickly become impossible. "Forget about framing, composition and safety," I thought to myself, "I don't yet know if I'll even be able to physically shoot this thing!"

In order to help the design team modify the ramps and pathways around The Machine, I constructed a wooden replica to match the height and width of my rig, telling them, "If you can fit through an area carrying the replica, I can make it work".

In total, we had two days to rehearse; one day with the camera department and one with the band. I used Damian's point-and-shoot camera to film the rehearsals so we could find out how the band members could scurry around the warehouse floor to get from station to station out of shot. Meanwhile, I started working on my 'dance moves'.

I've always viewed operating a Steadicam system as part dance and part camerawork. It's a blend of visualising where your feet need to be in relation to your hips and the position of the camera. Maintaining balance while moving through an environment and keeping a level horizon can be difficult, but the effect of allowing the camera, and therefore the audience, to 'float' through a scene in a dynamic way is well worth the effort.

Gearing up

The video was shot with the band's Sony EX3 fitted with the stock lens and a Preston FIZ unit for focus, iris and zoom control. A Cine Tape system was used to gauge focus, as the idea of an assistant pulling focus over my shoulder was unworkable. The camera department operated remotely from a monitor, with the first assistant



▲ The doors used for the song's title were found in a demolished building near the warehouse

cameraman on focus and the second assistant cameraman on iris. The DoP operated the zoom via a MicroForce unit. The camera was powered by a Sony-to-Anton Bauer adapter plate with an onboard Anton Bauer Dionic 90, which supplied power to all the camera-mounted support gear (it also doubled as additional weight to get the sled up to the minimum weight for flight, around 20lbs).

My camera stabilizing system or 'Steadicam' is the Glidecam X45 system wired for 12 volts and powered by an Anton Bauer Hytron 140 battery (in this case just providing the counterweight for the sled). The monitor is a Nebtek NEB70HDS powered by an Anton Bauer Dionic 90 (also adding required weight).

Ultimate rollercoaster ride

When I arrived on set to shoot, the pressure I felt to help bring this project to life was intense. Before we began, I heard about the 'hat' being passed around. For a dollar, engineers and crew members could pick a 'take' number – the number of attempts it would take for the machine to work all the way through. As I geared up to shoot, I overheard whispers that the highest pick was in the mid forties and the collection was well over \$100! I thought, "Forty takes? I hope it doesn't come to that."

And so we began. As afternoon gave way to evening, the slate numbers began to climb. Take after take, the machine was in constant

need of adaptation and refinement and, with each adjustment, I needed to adjust my dance. Amazingly enough, even the temperature and humidity played a part. The machine was alive and, depending on whether we were shooting at 2am or 2pm, it would behave differently.

For a dollar, engineers and crew members could pick a 'take' number – the number of attempts it would take before The Machine worked all the way through

Originally, the video was budgeted for two days of shooting; however, after two back-to-back 16-hour days, the machine had yet to work all the way through. The time had come for a make or break decision. Scrap the original idea of a single shot or sign on for another day and see it through to the end. As one, the entire team elected for option two and, thankfully, the video's sponsor State Farm agreed. I am so glad they did.

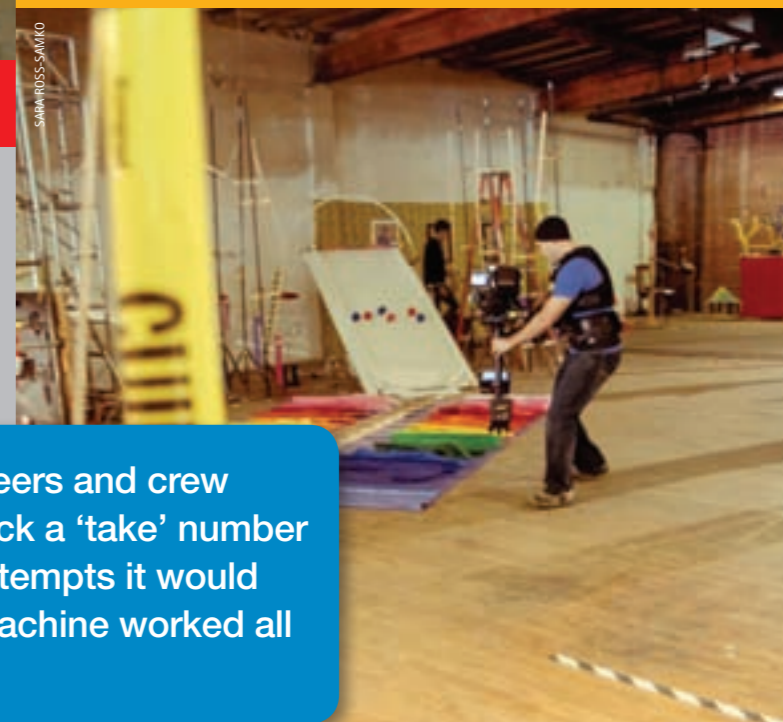
Taking on The Machine

I worked without a spotter watching my back or an AC hovering over my shoulder to pull focus. It was me versus the machine, a dance partner whose construction and integrity consisted of materials ranging from

▼ The band member puppets were originally designed to dance, but later modified to stick puppets



▼ Each section of The Machine presented its own unique challenges, ranging from camera height, focus, speed and environmental obstacles, such as dropping pianos and swinging buckets



▼ OK Go band members were important triggers during sections of The Machine, including when Damian flies through the air and knocks down several boxes



▲ Steadicam operator Mic Waugh pauses for a moment in between takes



▲ The custom built 'elevator' to lower Mic while shooting consisted of a platform lowered by hand using a rope and pulley system



▲ The video was shot using the Sony EX3 (owned by the band) powered by an onboard Anton Bauer Dionic 90

paper clips, ball bearings and flags to pianos, oil drums and sledge hammers. All of these components were meticulously placed, fashioned and organised with incredible attention paid to detail and the laws of physics. Bump the table – fail! Kick a trigger – fail! Stumble on a ramp – fail! Get caught up in a swinging teapot hung by fishing line – fail!

As take 85 flashed up on the slate covering band member Tim Nordwind's paint-splattered face, I'll admit I had my doubts. But thanks to the incredible attitude of the band members and all involved, I never actually lost faith. I couldn't bear the thought of all this creativity, positive energy and teamwork not realising its goal. I couldn't accept that this extraordinary, ingenious rollercoaster-of-a-ride wouldn't be shared and would die, forgotten in a leaky old LA warehouse. It sure as hell wasn't gonna be because of me, a camera guy...

Finally, a deep breath, one more encouraging smile from Tim and the strength to utter the words, "camera speeds and is... set". Take 85... We had our video.

▼ The sprawling, two-storey machine required overhead lighting to prevent shadows



Fact File

Mic Waugh is a Steadicam operator/cameraman who splits his time between Phoenix and Los Angeles. He has never been known to turn down an opportunity to work with a great crew. A few of his recent adventures include shooting the behind-the-scenes making of Sting's 2009 winter album, *If on a Winter's Night*, and a 21-day trip to Nepal documenting a hike to Everest Base Camp (*Dhani Tackles the Globe*). His Steadicam work can also be seen in *Blood into Wine*, a documentary following musician Maynard James Keenan (*Tool, A Perfect Circle, Puscifer*) as he works to establish himself as a credible winemaker, and also the feature film *Queens of Country*. Contact Mic Waugh, Steadicam operator/owner, Level Image at: mic@levelimage.com
Mic's website is at: www.levelimage.com

OK Go 'This Too Shall Pass' was recently voted Best Rock Video in the UK Music Video Awards. See the video at: <http://www.youtube.com/watch?v=qybUFnY7Y8w> and watch behind-the-scenes footage at: <http://www.youtube.com/watch?v=3fTe05UMY0M>
OK Go's website is at: <http://www.okgo.net>

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