

HEROIC PROPORTIONS



TINY AND MIGHTY, THE GOPRO HAS BECOME A FAVORITE FOR ICG ACTION SHOOTERS

by **DAVID GEFNER** *photos courtesy of* **GOPRO / MAKO KOIWAI / PETER PILAFIAN / ERIC ZIMMERMAN**

Since its debut in 2008, the marketing wizards at GoPro have touted the micro-cam's versatility and hardiness. Their "Be A Hero" campaign was hugely successful, selling 800,000 units last year (according to IDC Market Research) of the 170-degree, 1080P broadcast-quality HD Hero, while urging its mainly consumer users to put the GoPro in the most demanding situations possible. [Recent Wikipedia entries report GoPros being used on more than 60 TV shows, including "inside the mouths of alligators, sharks and polar bears," and in more "conventional" POV applications, like surfers roaring through a 30-foot Tahitian wave and parachute skiers out-running an avalanche in the French Alps.]

But even hard-core GoPro users, including dozens of Local 600 shooters, would be pressed to dream up the scenario L.A.-based Guild member Eric Zimmerman encountered for a recent documentary shoot. *Fallen Star* (<http://vimeo.com/36383359>) is a non-fiction account of artist Do Ho Suh's commission for UC San Diego's Stuart Collection, which brings site-specific works of art to the campus – in this case a three-quarter-sized house weighing 70,000 pounds and raised several hundred feet into the air to be cantilevered onto the roof garden of UCSD's Jacobs Engineering building. The end result, which no other structural engineers in the world had ever attempted, left the sculpture jutting out in space like Dorothy's tornado-blown abode in *The Wizard of Oz*.

"I've used GoPros in sports situations, where I needed a light-weight, semi-disposable camera," Zimmerman explains. "But this unusual shoot also required carefully controlled compositions in full lock-down mode with something that could roll continuously for three hours. We had no control over the event, and safety issues precluded us from having operators inside the house or anywhere near the lift."

Zimmerman mounted GoPros inside one of the largest cranes in the United States for a bird's-eye view. The crane cost \$3,000 per hour, so the DP and his team, which included Guild members Julie Kirkwood, Gilbert Salas, Steve Mattson, Erik Stapelfeldt, Bret Suding, Rick Heron, David McDonald and Todd Bell, could not communicate or distract the crane operator in any way.

"Since the whole lift took about 28 seconds," Zimmerman continues, "I needed to expand that timeframe onscreen by using more than 30 cameras: eight full-chip yet lightweight F3s for the highest possible quality, eight Canon 5Ds/7Ds, and 16 GoPros, rigged in spots where it was simply too dangerous or impossible to get to."

While Zimmerman admits the Hero is far from perfect ("I would love to be able to change the lensing and have a 24P version that captures at 4:4:4"), he says he was surprised by how well the footage cut with the Canons and Sonys.

"The GoPro's automatic exposure nailed it, and I never had





to balance skin tones," he reports. "In terms of electronic noise and blown highlights, it held up very well. We even strapped one to the project foreman's chest, who forgot it was there because it's so unobtrusive and light. He's one of the sets of hands on the roof receiving the guylines as the house comes off the crane. How else but with a GoPro do you even get that shot?"

"How else but with a GoPro?" might as well be on the business card of Local 600 1st AC Mako Koiwai, the Guild's self-described "GoTo GoPro Guy" who's mounted the little titans to every kind of racing vehicle imaginable.

"I did a Ford informational where we used 14 GoPros rigged inside SUVs to record reactions from people off the street," Koiwai smiles. "For a large-budget Chevy truck project I was given free rein with seven GoPros to allow production to get tons of quick shots of suspensions, trucks driving over cameras, and prop railroad-crossing barriers being smashed. We also rigged the GoPros inside the vehicles for inserts of the instrument panels, to see revs climbing or strong acceleration on the speedometers."

Last year Koiwai hit the GoPro mother lode when he spent eight days at the Indy 500, working the Discovery Channel's 100th Anniversary show, shot completely in 3D. "Since DSLRs don't sync," he observes about the experience, "there is no smaller 3D camera package than the GoPros. But the 3D GoPros have such a wide field of view that you can't have near objects cutting into your frame. I would use them on a monopod in the

pits and paddock, which allowed me to reach above or past the other shooters to avoid their intrusion into my frame. For handheld shots, I mounted the 3D GoPro housing into a K-Tec Norbert Jr. frame, giving the cameras a bit more heft for steadier shots."

Koiwai says that due to the GoPro's small sensor, extra care must be taken to achieve professional results. "Since you only have Auto Exposure," he continues, "you need to know when to use the Spot Metering setting and when to stay with the Center Weighted mode. In bright light you will get a strobe look with fast action, so I add ND gels to get the shutter speed down. They may look like toys, but the Hero 2, with its 11-meg sensor and improved color balance, is now considered the professional mini-cam." [GoPro's new firmware upgrade, Protune™, comes embedded with Technicolor's CineStyle™ color profile, offering pro shooters a much-improved workflow to integrate with other source material and post-production platforms.]

Indeed, the consumer-oriented GoPros have been lighting up the pro ranks. Paul Maibaum, ASC, says using them on *Sons of Anarchy* was first suggested to him by 2nd Unit Director and Stunt Coordinator Steve Davison, who was looking for ways to safely get unusual shots of the motorcycles during chase sequences.

"Steve needed a camera that could be mounted on the motorcycles and in some instances on the motorcycle rider," Maibaum explains. "GoPros are very easy to hide from other cameras in a multiple-camera stunt situation, and [because they're so inexpensive] you don't have to shy away from placing them in spots where



the main camera might get damaged. The lack of a viewfinder isn't really a problem since there is a small external video monitor that is available as an option." [GoPro's new Wi-Fi BacPac and Remote Combo Kit can stream a preview image to mobile devices.]

One action sequence on *Anarchy*, in the Season 4 finale, featured two GoPros mounted on the main picture car – one under the front bumper and one on the interior rear-view mirror – as Tig [Kim Coates] drives through the middle of a patio restaurant in an attempt to do major bodily harm to Leroy [Tory Kittles]. "We also mounted a GoPro on the dashboard of a Mercedes picture car, shooting back at Leroy as they attempted to chase down and apprehend Tig after the restaurant crash, where Leroy's girlfriend was killed as a result of the mayhem," Maibaum continues. "As long as the duration of the GoPro footage was kept fairly short, they cut very well with our Alexa and Sony F3s."

As for limitations, Maibaum singles out the GoPro's user control buttons. "When the camera was inadvertently left in the still position instead of video, there was no obvious warning light," he explains. "The other drawback, at least for a show like *Sons of Anarchy*, is the inability to handle extreme vibration. Mounting a GoPro directly onto the Harley-Davidson's engine usually resulted in picture quality that was unusable."

Rolling shutter has not been an issue for action documentary DP Peter Pilafian, who admits he did not take GoPros very seriously when they first hit the scene due to issues of contrast,

resolution and distortion. "They seemed like toys," he smiles.

That all changed when Pilafian was hired to provide material for a Denver ski museum that would allow visitors to simulate a 90-meter jump through the air, including a crash landing. "I shot a test last fall and realized the GoPro's 960 setting – essentially 4 by 3 – is its native resolution," Pilafian says. "In the 16-by-9 broadcast world, I've always chosen to shoot the GoPros with a 4 by 3 frame to give the editor maximum flexibility with framing."

Museum installations demand very high-quality footage that will be seen for years, so when Pilafian mounted six Hero HDs on the helmets and chests of 16-year-old athletes, travelling 65 mph and 300 feet through the air, and sent the test to the production company, he was surprised by the response. "GoPros have never been that great with high-contrast locations, like bright sun and snow, given how small a camera it is," he adds. "But they called saying everything looked great."

"Anytime you put a GoPro on an athlete, you have to help them to understand they are now the camera operator. In this case, I needed the jumpers to take in the whole field of view prior to the jump, moving more smoothly and holding their heads still whenever possible. I wasn't worried about the GoPro when it came time to shoot the crash footage – they are bombproof. In fact, I actually had one of the jumpers take the camera off in mid-air and toss it down the hill!"

Guild member Brian Dzyak, who specializes in behind-the-scenes EPKs, found out about the GoPro on the desert location



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- Mako Koiwai, 1st AC



of *Fast Five* (shot by Stephen Windon, ACS). "I went out with an F900 hoping to get some interesting stuff, and I saw the picture car guys for [stunt driver] Dennis McCarthy mounting these tiny cameras for a truck test. The footage looked awesome, so I went home that weekend and bought a couple."

According to Dzyak, the main challenge of capturing strong behind-the-scenes stunt footage is "never having enough room for myself or the camera. The GoPro solves a lot of those problems. But I still had to customize it for my own specific needs," he says.

Those include a cardboard angle device that quickly allows Dzyak to set accurate framelines, and a right-angle Cardellini clamp that lets him clamp the GoPro on to just about any picture car or process trailer he might encounter. "I also run a safety cable where the mounting screw on the bottom is supposed to go, which makes me fairly certain the GoPro won't pop off during the shot," Dzyak adds.

For the upcoming *The Bourne Legacy*, Dzyak needed to find

a spot inside a grocery store that would capture a stunt rider crashing inside and doing a header off the bike. "Production had so many of their own cameras in place, it was challenging to find a spot," Dzyak recalls. "So I decided to dress a GoPro up with banana leaves and I got this incredible angle of him coming right into my camera."

When the set was cleared for a 360-degree Steadicam move in *Fast Five*, operated in Puerto Rico by Geoffrey Haley, Dzyak hid four GoPros in piles of garbage lying on the street. "I won't put a DSLR or F900 in harm's way because they cost too much," Dzyak concludes. "But the GoPro is cheap, nearly indestructible, and very small, so it really fits my needs of getting exciting behind-the-scenes shots without getting in the way."

CSI: Miami cinematographer Ken Glassing brought in DSLRs for locations too tricky for his A-camera, the Panavision Genesis. "When the Canon [5D] couldn't handle the vibration on a motorcycle mount, we brought in the GoPro," Glassing chuckles. "I've used GoPros to supplement our digital SLR package – car and mo-



“ I dressed a GoPro up with banana leaves inside a grocery store as the [stunt motorcycle rider] crashed toward camera ”

- Brian Dzyak, EPK Shooter on *The Bourne Legacy*

torcycle mounts, and underwater work – ever since. We mount them on our hero cars for POV and car-to-car shots; they are so small our VFX guys can just paint them out.”

Glassing describes an episode teaser where the script called for the *CSI* characters to have wearable video cameras. “We used the GoPros for that chase scene and it worked out great – as did mounting them as a POV on rifle barrels, which has become an iconic image these days,” Glassing adds. “I really wanted to push the visual envelope when I took over [*CSI: Miami*], and I told our producer, Sam Hill, I was going to try things that were a bit radical. When we brought the GoPro out for the first time, everyone was like: ‘How much smaller can these things get?’ At this point, we’re all just trying to keep the storytelling in pace with the technology.”

And a furious rate of change that is. Still, despite the GoPro’s surprising advance into the professional ranks, many Guild shooters doubt similar format minicams will supplant larger format tools, given the advent of 4K digital projection and 2K home the-

ater systems. Maibaum says that while using consumer cameras for specialty action allows him to avoid the risks of costly delays with a main camera, “the [image] quality can’t compare to a camera designed to shoot motion pictures. At the end of the day, I don’t want something that requires a lot of after-market add-ons to make it work for another application.”

When quizzed if GoPros might ever replace Union operators, Maibaum says it’s exactly the opposite: “These cameras are being used in addition to the regular cameras on any given production,” so the camera ranks may need to increase. “Because they’re being used in such precarious locations, they demand the trained eyes of an operator to make sure the cameras are capturing the proper shots as dictated by the story, the action to be captured, and the visions of the director and director of photography.”

