

# A view to a thrill

With two BBC series and a pop promo under his belt, **DAN MULLIGAN** is well versed on the benefits of high def. His top tips: trust the camera and don't skimp on your lens

**F**reelance camera owner/operator Dan Mulligan of Rogue Element Films has compiled considerable experience in HD cinematography notching up a recent Liberty X promo, shot uncompressed 4:4:4 against greenscreen, and two seasons of *Last of the Summer Wine* plus BBC detective drama *Mayo* all in high def. "HD has become a pretty broad term," he observes. "There are plenty of people who think HDV is HD. It's nothing of the sort. At least with

film there's a clear understanding of the level of production required. HDV is fine for sports or news, but it shouldn't be anywhere near a drama." Mulligan prefers to categorise high-end high-def as digital film-making. "You're using exactly the same level and type of crew as you would for film. A first and second assistant director, a DoP and director," he says. "Most DoPs have used DigiBetas so they're already clued up on video cameras. From then on it's a case of trusting the camera to work just as for

film. There should be no change to the way you'd approach lighting. You need to meter, although I'd advise not reading off the monitor, and the only difference is that instead of film stock you can dial in the stock in post." The main change, he says, lies in the digital workflow that allows you to see rushes the instant they're shot. "You get an immediate feel. You can see what's been lit and whether an area requires more or less fill light." For Mulligan, digital film-making can only be truly achieved with

uncompressed capture from cameras like the Genesis, Viper and Arri D-20. The Viper, for example, captures information straight to the CCD, bypassing all in-camera processing. "Whether you output to disk or tape, that's a pure unprocessed chip that buys you an extra stop and a half of exposure range," he claims. "You're not converting colour temperature, gamma correction or highlight control. The DoP has exposure control straight from the lens. With more exposure latitude, and more picture data captured to the system, it gives you the ability to hold light levels." HD cameras of whatever flavour don't carry the same dynamic range as film and are more likely to reveal an under or over exposure. Mulligan dislikes HD cameras that tweak this gamma range in-camera and out of the hands of the operator.

"The digital negative system, which captures straight to the chip, gets nearest to a film aesthetic. It holds the highlights and rolls into the blacks gracefully. Essentially you're operating a digital workflow in a film-capture mode so the skill of the DoP can be concentrated on focus, framing and exposure rather than tinkering with 72 sub-menus." He finds the Achilles heel of all HD cameras to be the viewfinder. "Black-and-white viewfinders are better for focusing, I guess colour viewfinders will always be an issue. They're not perfect, but I can't think how they can be made better."

"For me the most important piece of equipment is the lens. I will usually recommend Zeiss Digi Primes but, at around £500 a day, they are expensive. As such, it's important that a producer understands the technical aspects that affect image quality." "There's always a tipping point with formats and you can either start a trend or react to it. A lot of HD owner/operators are too scared to plump for new formats if the work isn't there. But if you don't have the kit no one will hire you."

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# Why the first is Last

Slow-burning well-loved sitcom *Last of the Summer Wine's* use of HD shows that a series need not be at the cutting edge to lead the way in technological advances

**P**roving it's not just the preserve of Hollywood blockbusters such as *Miami Vice*, Thomson's Viper Filmstream is getting a decent turn around the town of Holmfirth, West Yorkshire, home of evergreen BBC sitcom *Last of the Summer Wine*. It's the first UK sitcom to be shot with the system.

"We recognise this isn't as glamorous as it would be on, say, *Hustle* or *Silent Witness*, and you could say it's over-engineered," says camera operator Dan Mulligan. "But if we can prove HD workflow on a slow-burning well-loved series with a normal budget we can demonstrate that you don't have to be at the cutting edge of feature film to get involved with cutting-edge technology."

Mulligan, who supplies and operates the HD equipment, advised DoP Pat O'Shea and director Alan J W Bell on the Viper's application for the 28th series of the comedy classic. He had performed a similar role for the pensioners' previous outing, which was the first to move from 16mm to HD.

"Every drama the BBC does needs to be shot in HD by 2010, but over and above that the director and DoP were happy to research HD, work with it and trust the camera," says Mulligan. "There was no inherent reason to change from 16mm, but I got them to look at my HD demo reels and understand the workflow advantages which HD gave them, and



it became obvious to them that this was the way the world was headed."

Production of the 27th series, shot on the Sony HDW-750, was a success, but Mulligan had already begun to research the digital-negative concept, and before last Christmas opted to purchase the £65,000 Viper camera. He approached Bell and demonstrated the camera and some sample grades over a two-week period in February. In doing this, he gained the team's trust to deploy it for this year's four-month shoot of 10 x 30-minute episodes plus one Christmas special.

"By hiring someone who knows the way the camera functions, it softens the blow of new

formats for the production," he adds. "There was no point in using the Viper if it wasn't right. But I felt it fitted my approach to cinematography – an approach that was right for this production."

Footage is captured as 4:4:4 files at Sony Cine-tal. Rushes are down converted to DVcam for editing on Avid Media Composer in-house at the BBC. Says Mulligan: "We could almost get away with shooting just off monitor since we were trusting the camera so much. That allows the director to watch the performances by eye and trust the camera to capture the scene."

With around three quarters of series shot outdoors (the interiors are shot at Pinewood) Mulligan advised O'Shea to light as he would for film. "Even if we open the lens up in the evening it will hold the balance and not lose any colour information," he says.

He adds: "The actors don't feel threatened by it either. If anyone knows anything about HD in acting it's that it can show make-up, warts and all. But the cast were able to see us lighting as we would for film, using the same sets and carrying on as normal, so they had no problems."

**TX:** December 2006  
**Length:** 10 x 30 minutes  
**Production Company:** BBC Entertainment  
**Broadcaster:** BBC1

