

Panavision up close

Emmy Award-winning DP Ousama Rawi discusses the look of Showtime's global hit and why he uses Panavision's Genesis Camera System

by Skip Ferderber

Shooting "The Tudors"

THE TUDORS

Ousama Rawi – Ossi to his friends and colleagues – is finicky, almost to the point of being fanatical, about the way his images look when he's shooting a production. As the cinematographer on Showtime's "The Tudors," now in its third season on cable and production underway on Season Four, Rawi takes great pride in the filmic look of the series, which captures a range of intense settings from sun-swept castle exteriors to candle-lit boudoirs.

Rawi has worked hard to make digital cinematography systems deliver the elegant look he wanted for "Tudors." But it was not until he spent Season Three working with the Panavision Genesis digital cinema system that he realized what he has been missing in the first two seasons.

"Season 1 and 2... I got a lot of kudos, and attention," he said in a recent interview, "but I knew I could do better if only I had the Genesis."

The "Tudors" look has been one of the major factors in the series' global success, and has earned Rawi a raft of awards from his peers including the Canadian Society of Cinematographers (CSC) and Canadian Gemini awards, both in 2008 and 2009, and most recently, a 2009 U.S. Emmy from the National Academy of Television Arts and Sciences.

He shot the first two seasons with a Sony F900 camera (rented from Panavision), switched to Genesis for Season Three, and is currently shooting Season Four with Genesis on location in Ireland.

Most viewers may not notice the differences from season to season because he worked long and hard to establish the look and to keep it consistent no matter what camera he used. "One of the differences is I can achieve it far more quickly, therefore easily [with Genesis]. If it took me 20 minutes to balance an interior with a view out-the-window [hotspots], with the Genesis it would take me half the time because I'd have far less balancing to do simply because of the exposure latitude."

It enables him to complete his planned setups so rapidly that the director has more "golden time" for experimenting: in other words, shooting more like a film without adding to the daily budget.

A variety of technological improvements makes the Genesis better for his production, according to Rawi:

- Genesis' ability to work in full 4:4:4 color space.
- Exposure latitude. Rawi measures the Genesis latitude at 11.5 stops. Because he shoots both interiors and exteriors, including many where hot-spot clipping is a continual threat (e.g., bright sunny skies; a dark candle-lit room with an exterior window, shot on location and shot during the day), he needs the extra latitude that Genesis provides.
- The size of the Genesis sensor, enabling him to film with 35mm lenses (such as Panavision Primos) and establish shots with the shallow depth of field familiar to cinematographers on film shoots. Before using Genesis, he noted, "to shoot exteriors with the aperture wide open, I had to put so much filtration in front: neutral densities, polarizers and all sorts of other light-blocking filters in front of the lens: all that glass, so I [could] create some shallow depth of field. With Genesis, because I was using regular 35mm lenses I could filter it as if I was shooting 35mm film: just a simple polarizer and an 85 filter was enough and I had a decent F stop there."
- Genesis is a relatively compact camera, easily placed on a Steadicam mount for going through doorways and/or in the cramped quarters of a 4'x4' Tudor carriage. "You try to shoot a carriage interior when 3'2" of this space is taken up by the camera before you've got an actor in there," he laughed. Also, when in Steadicam mode, the ability to use the new SSR capture system on the camera instead of having the tape deck attached to the camera by an umbilical cord and carried by a grip, was a huge benefit for the Steadicam operator. With the significantly reduced weight of the camera, the whole camera system was self-contained on the Steadicam mount just like on a film shoot.



In the Tudors series, where so much depends on delivering the look and feel of an era centuries before the advent of electric lights, where candle light or torches were the only interior illumination in darkness, a great many of the scenes are lit in low-key light. This results in many deep shadow areas within a scene. It's a well-known fact that deep shadows and blacks in low-key situations will increase the potential for video noise. The avoidance or elimination of video noise is therefore essential for maintaining picture quality. Rawi gave the Genesis high marks in this area. "There was a distinct lack of noise," he continued. "It's got remarkable low level of noise; that's a huge plus."

"I do use artificial lighting, of course, [even if] it's only to supplement the candle light, the images lit by flambeau, a torch or a fireplace. So I don't use any lights that are brighter for my night interiors. None of my lights that I use on the set are brighter than any of the flames. That way, a lit candle looks like the brightest thing on the set."

In post-production, using Genesis has changed the paradigm of how the show is assembled, Rawi noted. At C.O.R.E. in Toronto, where the digital effects are completed, CGI work goes much faster because the source material is virtually uncompressed and 4:4:4, the format in which they create and develop their effects. Footage from previous seasons arrived from the set in 4:2:2, requiring up-converting to 4:4:4 to match the facility's workflow, then degraded back to 4:2:2 to match the original image. Working with Genesis-originated material, Rawi added, "was an eye-opener [to them] because they were working in the same color space."

The improved picture quality is also evident. "Even lay people—by that I mean non-technical people viewing the cuts—would email me and say, we saw such and such a sequence. It's great! The look is different, we can see deeper."

Another contributing factor is the use of Panavision's Genesis Display Processor (GDP), a "black box" that enables the DP to see an image on set which is close to his/her final intent, and communicate that look throughout the entire post-production process. The GDP has the capability of accepting and generating lookup tables (LUTs), which allow the DP's inten-

tions to be preserved. The LUT stays paired with the footage: an unwavering, repeatable "blueprint" of the filmmaker's intentions no matter what the stage of production.

Prior to shooting Season Three, Rawi did test shootings with the Genesis and established LUTs that for interior day, interior night, exterior day, exterior night and natural unlit night looks. At the Technicolor facility in Toronto where the show is posted, he played with the timing until the right look was achieved in each case. These LUTs would be selected during shooting to guide the on set recording as well as in post-production to insure a precise uniformity of look. Rawi then used the Gamma & Density 3cP Color Correction system at the end of the day at his residence to further tweak the timing of each setup. A CD with the corrected image and the meta data of how it was arrived at would then go with the dailies to Technicolor.

For Season Four, he is using the same LUTs he established at the beginning of Season Three. "I was very happy with what I chose in Season Three. I didn't change one iota of any of my LUTs and the effects company is using the same ones to maintain the same intended look. Everyone's happy."

The results from shooting with the Genesis system is very much like shooting with film stock, he noted. "I emphasize this because I hear people say, 'Well, to make a digitally shot motion picture appear to be like film I will light it like I do film.'

"In my opinion, if you do that, you're probably doomed to failure because each digital camera's design and characteristics is unique to itself. It's like using different film stocks. You can get two different HD cameras but they behave differently as you light a scene. It's like changing your film stock. Just like with film stock, you plan and change your lighting according to the characteristics of your film stock.

"The Genesis is no exception [but] I find it easier to deal with the usual lighting problems you have when you're lighting a set. 'Tudors' is a case in point where most of the male characters are in absolutely velvety black costumes. Velvet absorbs all the light. It kicks back nothing.

"With the Genesis, I find it does see detail in that black."

