# Configuraciones de cámara HD para ganar latitud



de Valores

| T | Prime lens 24m/m | Densidad Itermediate Kodak 5242 | | | CV 8bits RGB | A |
|---|---|---|---|---|---|---|
| | Valores IRE | R | G | B | | |
| 1,5 | 97,5 | 1,39 | 1,95 | 2,12 | 255 | |
| 2 | 92,5 | 1,36 | 1,93 | 2,11 | 242 | |
| 2,4 | 87 | 1,33 | 1,9 | 2,08 | 227 | |
| 2,8 | 77 | 1,26 | 1,84 | 2,03 | 200 | |
| 3,4 | 65 | 1,18 | 1,75 | 1,94 | 168 | |
| 4 | 55 | 1,12 | 1,68 | 1,87 | 145 | |
| 4,8 | 47 | 1,05 | 1,61 | 1,8 | 121 | 32 |
| 5,6 | 40 | 1 | 1,55 | 1,75 | 107 | 40 |
| 6,8 | 34 | 0,94 | 1,48 | 1,67 | 90 | 50 |
| 8 | 30 | 0,89 | 1,44 | 1,62 | 79 | |

**Technical information**

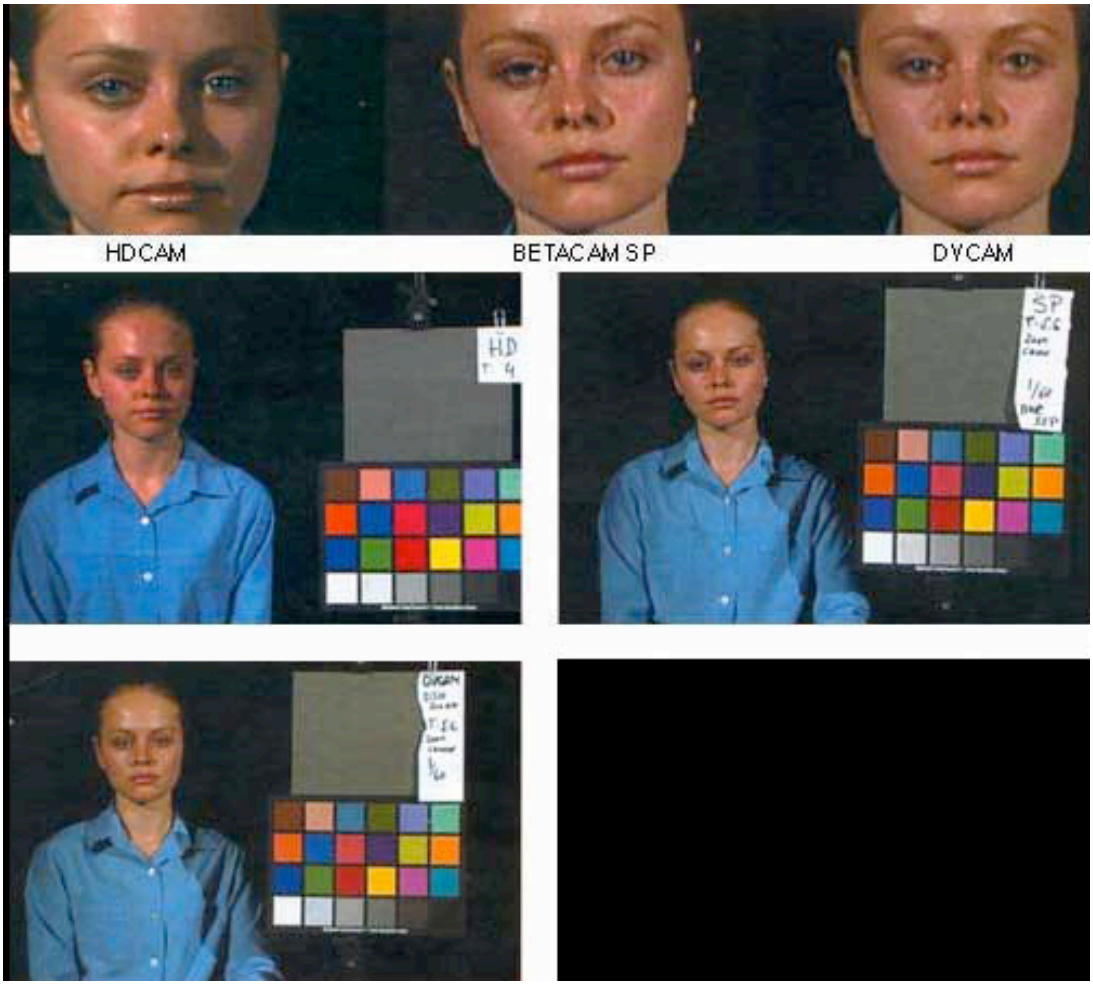
HDCAM 1:1.85 25fps Shutter 1/50 Sony F-900 Camera Canon EJ series lenses adapted to HD Shooting with Arrilaser Intermediate 5242/ Kodak Premier Positive

In Shooting Audiovisual's 6th issue, Marta Rey published an article about different aspects of production. In this text she offers all the technical information regarding the choice of Betacam SP format for certain sequences in a film, given its suitability to co-exist with footage shot in HDCAM. The other objective was to achieve as much latitude as possible with the Sony F-900 to obtain greater detail in both the highlights and low lights.

"El regalo de Silvia" tells four stories sharing the same starting point: Silvia's video-diary, therapeutic sessions whose emotional tone link us to the other narrative strands. Silvia decides to donate her eyes, her liver and her heart, which are received by people from very different backgrounds. The heart goes to a middle-low class man with ambitions; the liver to a hoodlum who wants out of his criminal career, and her eyes are received by a wealthy young woman who lost her parents in a car accident.

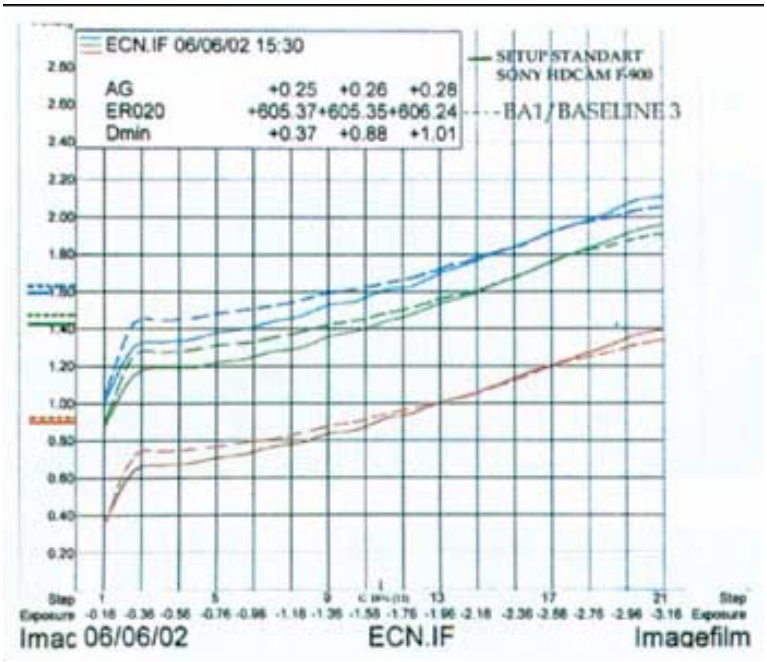
The three stories of the receptors were shot in HD given its proven quality and convenience when doing multiple takes. For Silvia's video-diary we wanted to use a format that, while being of an inferior quality and having the look of domestic video, would not alienate the audience when shown alongside the HD footage. We tried with two different formats: DVCAM and Betacam SP.

For Silvia's video-diary we wanted to use a format that, while being of an inferior quality and having the look of domestic video, would not alienate the audience when shown alongside the HD footage. We chose Betacam SP because it was very important to achieve a format with enough detail to capture the actress? expression while still looking like a home video

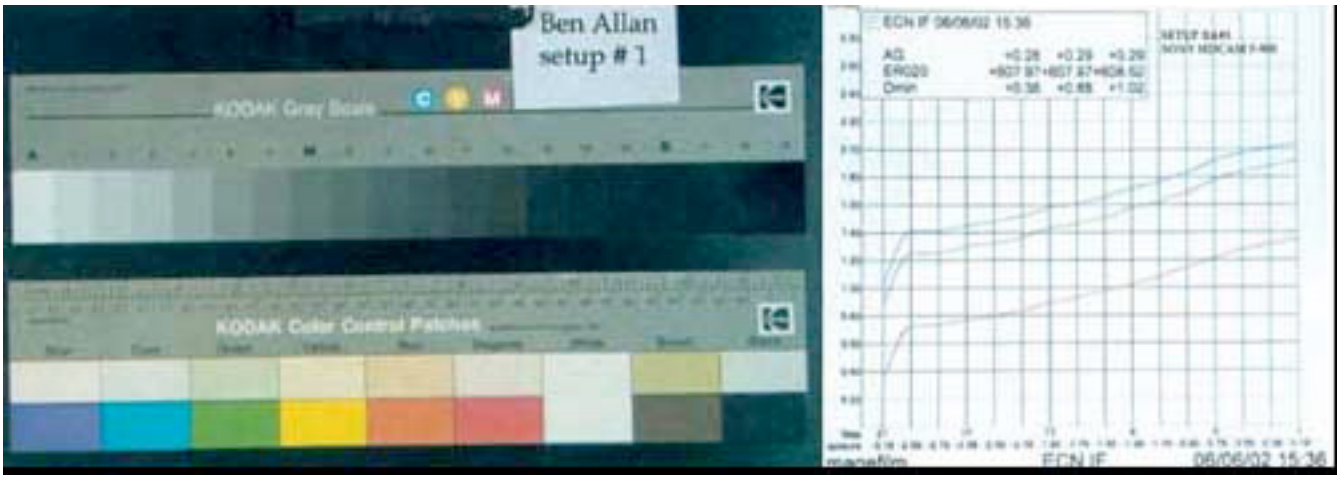


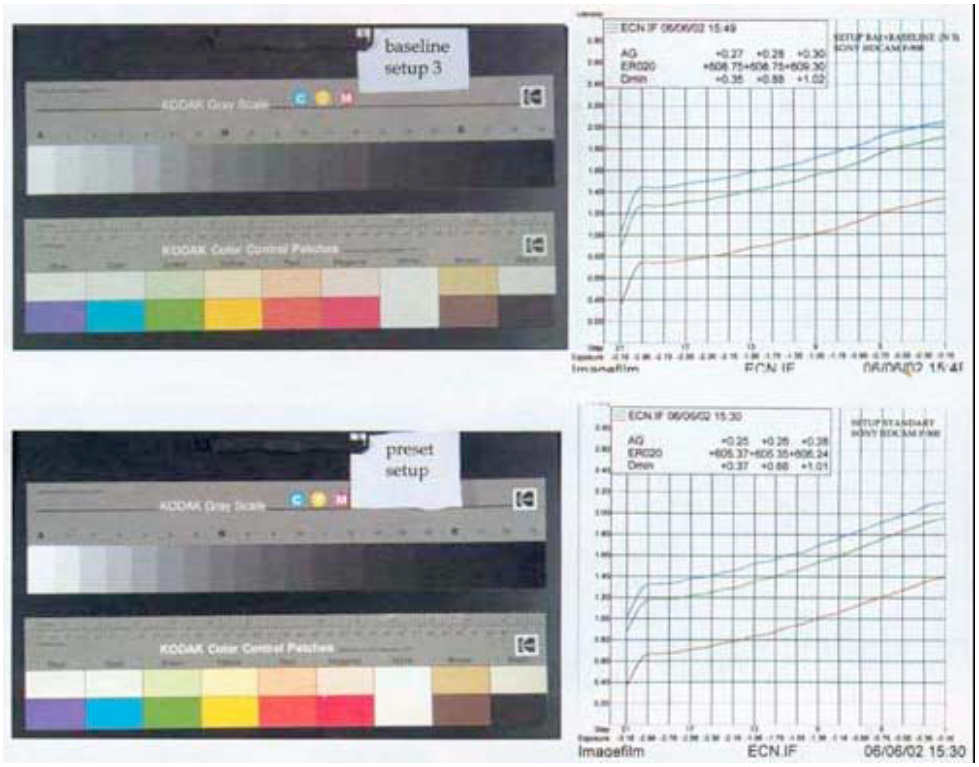

Once we had colour graded, linked the fields in postproduction and filmed to 35mm we decided for the analogue format whose definition was worst than DVCAM, with smoother transitions between the colours and the edges. As we can see in Fig. 1, the image was very different to the one in HD, while still retaining enough detail of the skin. It was very important to achieve a format with enough detail to capture the actress? (Barbara Goenaga ) expression while still looking like a home video. We decided not to shoot with an actual domestic video camera in miniDV due to its poor definition, as well as its poor reproduction of colour, which, when compared to the HD, would have destroyed the reality of the film.

Once we had decided on the Sp format for the video-diary we focused all our energy in achieve the largest latitude as possible with the Sony F-900 to obtain as much detail as possible both in the high and the low lights. We photographed a Kodak grey card with the camera's standard setup, and then we did the same using the modifications made by Ben Allan (www.cinematography.net), which increase the latitude by modifying the Knee, Whipe Chip, Slope, gamma, etc. controls.




These changes not only increase the latitude in high lights, they also make the loss of detail less dramatic than with the standard. On this set-up we modified the gamma and the black gamma by using the ITU-709 colour matrix. In the gamma menu we used coarse 0.45 and the 5th table, which reduces the compression of blacks and obtains the curve shown in the graph.






Comparing it to the standard we appreciate the increase in detail in the blacks and the change in the high lights, making the shoulder of the curve closer to the negative. The latitude increases around 2 F-stops in relation to the standard. It goes without saying that with this configuration colour grading becomes essential, because the image captured by the camera has little contrast, appearing slightly washed out, while having great amount of detail ( see stills ).



According to Jordi San Agustín, colour grading operator at Image Film digital: ?For the digital colour grading, the camera tests allowed us to find the largest latitude in response to the high and lowlights, so we always have accurate values for the whole of the density curve, which allows us to find the right balance for densities as well as for colour space and obtain a great transfer to 35mm?.

To conclude, in Table 1 we can observe the relation of all the values involved in the HD process. With the set-up we used the camera's sensitivity is around 400ASA, however we chose to use 500 ASA by underexposing slightly to achieve an even better response in the highlights, given the good behaviour of the camera with shadows.

Tabla de Valores

| T | Prime lens 24m/m | Densidad Itermediate Kodak 5242 | | | CV 8bits RGB | ASA | CV 8bits RGB Referencias | Stops | Patrón LAD | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Valores IRE | R | G | B | | | Cineon | | R | G | B |
| 1.5 | 97,5 | 1,39 | 1,95 | 2,12 | 255 | | | +3,5 | | | |
| 2 | 92,5 | 1,36 | 1,93 | 2,11 | 242 | | Blanco 90% 235 | | | | |
| 2.4 | 87 | 1,33 | 1,9 | 2,08 | 227 | | | | | | |
| 2.8 | 77 | 1,26 | 1,84 | 2,03 | 200 | | | | | | |
| 3,4 | 65 | 1,18 | 1,75 | 1,94 | 168 | | | | | | |
| 4 | 55 | 1,12 | 1,68 | 1,87 | 145 | | | | | | |
| 4,8 | 47 | 1,05 | 1,61 | 1,8 | 121 | 320 | | | | | |
| 5,6 | 40 | 1 | 1,55 | 1,75 | 107 | 400 | 18% gris 103 | | | | |
| 6,8 | 34 | 0,94 | 1,48 | 1,67 | 90 | 500 | | | 1,0 | 1,45 | 1,55 |
| 8 | 30 | 0,89 | 1,44 | 1,62 | 79 | | | | | | |
| 9,6 | 26 | 0,83 | 1,38 | 1,57 | 67 | | | | | | |
| 11 | 22,5 | 0,79 | 1,33 | 1,52 | 59 | | | | | | |
| 13,6 | 20 | 0,75 | 1,28 | 1,47 | 50 | | | | | | |
| 16 | 17,5 | 0,7 | 1,23 | 1,41 | 42 | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | Negro 2% 26 | -4 | | | |