

# WHICH DSLR?

John Henshall continues his look at leading Digital – and Film – Single Lens Reflex cameras

**T**he choice of a Digital Single Lens Reflex is based on many varied considerations. I have chosen to concentrate on the quality of the images produced by the cameras rather than on the operation of the various knobs and buttons.

How well detailed are the images? How well do they resolve fine detail? How well do they handle a broad range of tones? Are subtle tones, for example in skies, reproduced smoothly? How good is the Auto White Balance?

The picture of Bear House, used in part one of this review, was chosen to illustrate these factors. Although each camera on test resolves different amounts of fine detail, with differing artifacts – such as colour aliasing – each camera handles the wide tonal range adequately.

How well do the cameras reproduce normal flesh tones? How useful and accurate are the camera's pre-set Flash White Balances?

All the Canon DSLRs and the Fuji S3 produced quite warm results from the camera's pre-set flash white balance, the Nikons being more neutral. The cameras would clearly benefit from the production of a custom white balance to suit your particular strobes.

All the cameras produce pleasing flesh tones, although those from the recently discontinued Kodak DCS ProSLR/c are slightly less saturated.

How accurately do the cameras reproduce colours?

This is something which some users find much more important than others.

Despite film manufacturers' valiant attempts to make film which records colours accurately, film has never done so. That's why we preferred the look of one film over another. In fact we often preferred the distortion of colour that a particular film brought to the party.

Usually we preferred the film which gave flattering flesh tones. Not many



people want to see the accurate reproduction of the light magenta flesh tones of a cold British winter.

To produce comparative shots which help show how the different DSLRs reproduce a variety of colours I have broken one of my own rules and opted to photograph a test chart.

The chart in question is the GretagMacbeth™ ColorChecker Color Rendition Chart.

This chart is made up of twenty four coloured squares in a wide range of colours, many of them naturally occurring – such as human skin, foliage and blue sky.

To aid comparison, I have produced a pure digital version of the Macbeth chart in the same colour space as that used for the camera shots. It is reproduced below, along with the names and RGB values of the squares.

Dark skin R94 G28 B13	Light skin R241 G149 B108	Blue sky R97 G119 B171	Foliage R90 G103 B39	Blue flower R164 G131 B196	Bluish green R140 G253 B153
Orange R255 G116 B21	Purplish blue R7 G47 B122	Moderate red R222 G29 B42	Purple R69 G0 B68	Yellow green R187 G255 B19	Orange yellow R255 G142 B0
Blue R0 G0 B142	Green R64 G173 B38	Red R203 G0 B0	Yellow R255 G217 B0	Magenta R207 G3 B124	Cyan R0 G148 B189
White R255 G255 B255	Neutral 8 R249 G249 B249	Neutral 6.5 R180 G180 B180	Neutral 5 R117 G117 B117	Neutral 3.5 R53 G53 B53	Black R0 G0 B0

It is hoped that this may aid comparison by offsetting some of the inevitable colour changes introduced by the reprographic printing process.

First I photographed the Macbeth under 'normal' shooting conditions, using studio flash with the cameras set at their lowest ISO settings at an aperture of f/8.

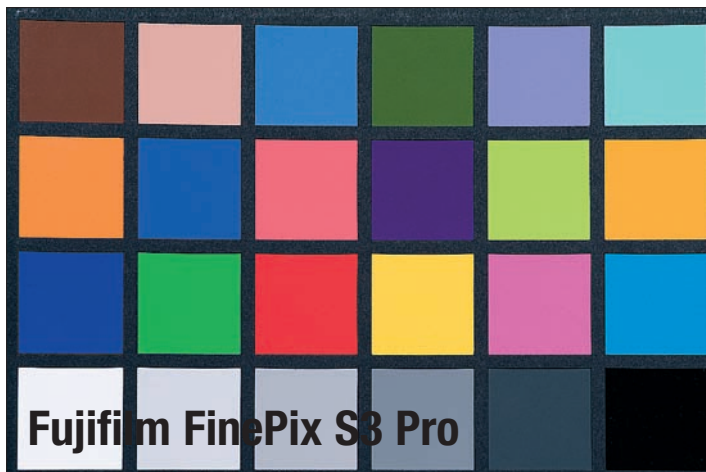
The resulting images (on the next page) have not been subjected to any adjustment in post production. They show a remarkable similarity to each other and to the Macbeth chart.

Next I set up some 'When the chips are really down' shooting conditions. How does the camera perform when there's almost no light? Each DSLR was set to its highest ISO setting and exposed using low-level bounced tungsten light using the camera's 'P' (Programme) mode. A very tough test.

Please refer to page 18 for an explanation of the method and results, which are reproduced on page 17.

After you've spent time studying the results I obtained, you should be in a better position to decide which DSLR is for you. **Ultimately, the choice is yours.**

# Macbeth Chart shot using studio flash at ISO100 with Auto White Balance



Copyright © 2005 by John Henshall john@epi-centre.com

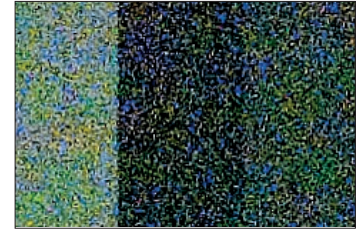
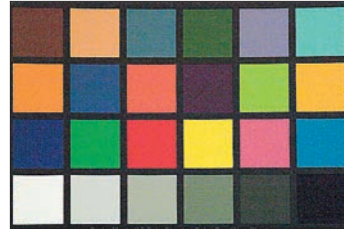
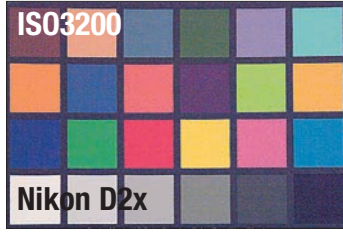
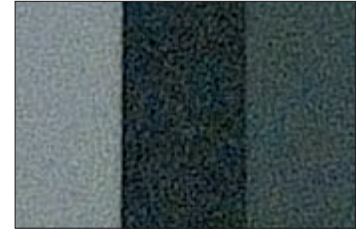
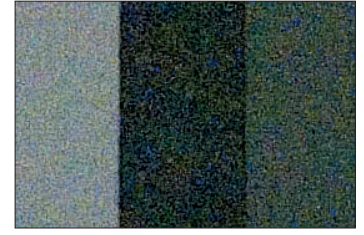
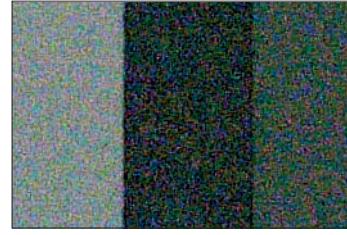
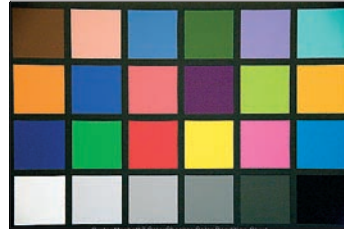
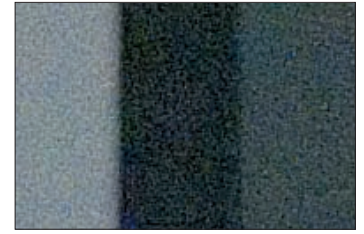
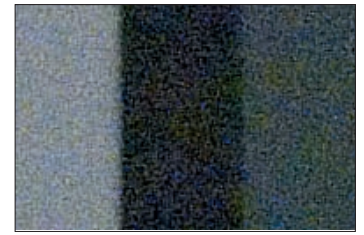
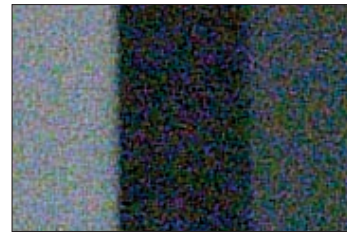


Max ISO as shot

Greys corrected

Noise as shot

Noise as reduced



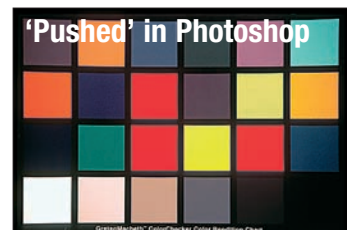
Copyright © 2005 by John Henshall, john@epi-centre.com



# John Henshall's Chip Shop

PREVIOUS PAGE (16): 'Normal' shooting conditions. A 24-patch GretagMacbeth™ Colorchecker Color Rendition Chart was photographed using studio flash with each camera set at its lowest ISO setting. In most cases this was ISO100, except in the case of the Kodak DCS ProSLR/c, the lowest setting of which is ISO160. The images, none of which have not been adjusted in post production, show a remarkable consistency with each other and to the test chart itself.

PREVIOUS PAGE (17): 'When the chips are really down' shooting conditions. Each DSLR was set to its highest ISO setting and exposed using low-level bounced tungsten light (colour temperature 2650K) using the camera's 'P' (Programme) mode. The first column shows the results as shot. Most cameras have difficulty in performing a satisfactory Auto White Balance at such a low colour temperature. The second column shows the same shots after adjustment of black, white and grey in Adobe Photoshop CS2 using the Eyedropper Tool in Curves. The third column is a big enlargement of a section of the corrected image, to show the image noise. The fourth column is the same section of the images but this time acquired using a Color Noise Reduction setting of 25 in Photoshop CS2 Camera Raw acquire. In the case of the Kodak DCS ProSLR/c and Nikon D2x, a CNR setting of 50 was used, in an attempt to further reduce the higher levels of colour noise.



ABOVE: The new Fujichrome Velvia 100 film as a comparison. First (TOP) using the same studio flash as the DSLR shots on page 16. Next (MIDDLE) using the same tungsten lighting as the shots on page 17 but with the film rated at ISO100.

Finally, film rated at ISO400 but processed normally and 'pushed' in Photoshop. LEFT: This photograph of the late great George Harrison was made in 1976 using the (then) new ISO800 colour negative film. The grain was much more obtrusive than the noise from any of today's DSLRs. The size of golf balls springs to mind.

BELOW: The high level of noise from the Nikon D2x at the 'Hi-2' (ISO3200) setting alarmed me, so I also tested the camera at the lower 'Hi-1' (ISO1600) setting.

