

Clipping, pushing and pulling

by Charles Hood

Many years ago I proudly returned back to the UK from a trip to the Red Sea with twenty or so correctly exposed rolls of celluloid, or so I thought.

I handed them all to the local E6 lab and two and half-hours later I was staring in total disbelief at film after film of overexposed images. About half of the films appeared to have been over exposed by exactly the same amount of what I judged to be 1 1/2 stops. What had gone wrong?

Disappointment turned to anger. If half were OK then the others should be OK. It must be something to do with the processing. No, they were all processed together. Then this horrible feeling inside me thought back to the trip. One day I had tried a 50ASA film (Fuji Velvia had just arrived on the market) instead of my usual 160ASA. Being in the days where I had to set the ASA manually I must have left it set at 50ASA when I then returned to my usual stock. Returning home confirmed the camera was still set at 50ASA. *!@£\$>*/!! The air was blue! It was totally my fault and I couldn't blame anyone else - although I did have a try.

So what did I learn? Mistakes will happen. In this case it was a human error, however, it could quite easily have been a faulty light meter, flash TTL problems, DX reader error (most modern cameras read the film cassette and automatically set the ASA) etc. etc.

I now have a set of rules and procedures when I return home.

Develop just one roll first. If fine, drip feed to the lab the rest of the films, in batches of say 2 or 3 at a time, examining the results before the next batch is processed. Now if a pattern of over or under exposure occurs corrective action can then be



The above image was correctly exposed and processed whilst the one below was "pushed" 3 stops resulting in correct exposure but increased grain and contrast



taken for the rest of the films.

If you only have one or two rolls of a very important subject it might be worth clip testing. What this involves is the processing lab develops approximately the first 6 frames of the film. These then can be examined and if found to be not perfect an adjustment can be made to the processing time to correctly develop the rest of the film. (note: you will lose one frame where the film is cut.)

To make the above two rules work, it is very important to number or label your films. Including other information such as the particular dive, camera settings, flash used and date may also be useful. Equally as important is to expose all similar images identically. For example, on a weeks dolphin/whale shoot we take a light meter reading and measure it to be say f8 at 1/250th second using 400ASA film. Shoot ALL frames at this setting.

This is absolutely critical if you are to have the opportunity to adjust processing times to correct whole films. Now suppose after developing the first film the images appear a bit too dark we could lengthen the processing time for the next film and reassess.

If you only have one chance with one roll to capture an image; then bracket (e.g. take three different exposures plus and minus say 1 stop from what the light meter reads) of the same subject, bracket and then bracket again. Don't trust the light meter, gut feeling or the rule of f8 at 1/60th second at 100ASA (although this is a particularly good rule).

Let's build on rule 4. If we bracket the first roll of the week and write down what we have done (don't even think about trying to remember it), this first roll now becomes a test roll for all the others. Once processed we will automatically now know if we have to adjust the processing times for the other

films and we should have at the least 1/3rd of a film of correctly exposed images.

Of course "pushing" (lengthening the developing time) or "pulling" (shortening the developing time) to compensate for wrongly exposed films, whilst resulting in correctly exposed images, does have slight side effects.

With slide film, a push will result in an increase in grain and loss of definition, where as a pull will alter the contrast and produce a colour shift.

Some photographers have taken these phenomena a step further and actually use these side effects to create an image different from the norm. Generally speaking a push of 1 stop will have only a small effect and 2 plus stops are required to be clearly visible.

It is worth mentioning that Fuji MS100/1000 professional slide film has been purposely designed to be pushed. It can be exposed either



Fuji MS 100/1000 is designed to be "push" processed. It's standard speed is 100 asa but it can be exposed at up to 1000asa and pushed over 3 stops in the processing. Velvia is designed to be exposed at 50 asa and given standard processing for optimum results.

at 100, 200, 400, 800 or even 1000ASA and processed accordingly. Personally I find at 400ASA it has better grain (sharper) than traditional 400ASA stock and at 800ASA it gives perfectly acceptable results where either one is shooting in dim light without strobes, require a fast shutter speed or very large depth of field.

Charles Hood

HMS Royal Oak video



The wreck of HMS Royal Oak in Scapa Flow is a designated war grave and all diving is prohibited but in 2000 a special permission was granted by the Ministry of Defence and the Royal Navy for the wreck to be filmed as a moving tribute to all those who lost their lives.

This new professionally produced 50 minute video includes underwater images of the wreck which have never been seen before and there are interviews with survivors and Orcadian Sandy Robertson who was the first diver to go on the wreck the day after she sank. Also included is coverage of another unique event when the ashes of Dorothy Golding, wife of Bandsman Arthur Golding, who went down with the ship, were taken down by her grandson, Christopher Kilford, and placed in the wreck to reunite the couple.

The finale is the unfurling of a battle ensign on the upturned hull by a Royal Navy diver on the anniversary of her sinking and the final credits include the names of all those who died in the tragedy.

Running time 50 minutes. Narrated by Tom Fleming. Produced by Ocean Optics Ltd. Directed by Peter Rowlands

The video costs £16.95 (+£2.50 UK postage). Total £19.45. Please send cheques payable to Ocean Optics Ltd and send them to: Royal Oak Video, 13 Langley Avenue, Surbiton, Surrey KT6 6QN.

Credit card tel & fax 020 8399 5709

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